Product specifications

Eaton 277135

Catalog Number: 277135

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 11 kW, 1 N/O, 415 V 50 Hz, 480 V 60 Hz, AC operation, Screw terminals

General specifications

Product Name
Eaton Moeller® series DILM contactor

Catalog Number
277135

Model Code
DILM25-10(415V50HZ,480V60HZ)

EAN
4015082771355

Product Length/Depth
97 mm

Product Height
85 mm

Product Width
45 mm

Product Weight
0.428 kg

Certifications
UL
CSA
IEC/EN 60947
VDE 0660

Catalog Notes
Contacts according to EN 50012

Powering Business Worldwide

defaultTaxonomyAttributeLabel

Electrical connection type for auxiliary- and control-current circuit

Screw connection

Amperage Rating

170A

Number Of Poles

Three-pole

Type

Full voltage non-reversing small contactor

Voltage rating

400 V

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.

Resources

Catalogs

SmartWire-DT Catalog

eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf

Product Range Catalog Switching and protecting motors

Characteristic curve

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

eaton-contactors-component-dilm-characteristic-curve-003.eps

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

Declarations of conformity

DA-DC-00004816.pdf

DA-DC-00004783.pdf

Drawings

eaton-contactors-mounting-dilm-dimensions.eps

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

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

eaton-contactors-dilm-dimensions.eps

eaton-contactors-dilm-3d-drawing-009.eps

eaton-general-ie-ready-dilm-contactor-standards.eps

eCAD model

ETN.277135.edz

Installation instructions

IL0340701 4Z2021_09.pdf

Installation videos

WIN-WIN with push-in technology

mCAD model

DA-CD-dil_m17_38

DA-CS-dil_m17_38

Specifications and datasheets

Eaton Specification Sheet - 277135

System overview

eaton-contactors-dilm-contactor-system-overview.eps

Wiring diagrams

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

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 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 (AC operated)

Pollution degree

3

Used with

Can be combined with auxiliary contacts: DILM32-XHI, DILA-XHI(V)

Climatic proofing

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

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

Connection to SmartWire-DT

No

Rated impulse withstand voltage (Uimp)

8000 V AC

Utilization category

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

Connection

Screw terminals

Frame size

FS2

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)

90 A

Conventional thermal current ith (3-pole, enclosed)

36 A

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

42 A

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

100 A

Equipment heat dissipation, current-dependent Pvid

4.2 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

1.4 W

Application

Contactors for Motors

Product category

Contactors

Protection

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

Terminals

Screw terminals

Arcing time

10 ms

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

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)

3

Operating temperature - max

60 °C

Operating temperature - min

-40 °C

Rated breaking capacity at 220/230 V

250 A

Rated breaking capacity at 380/400 V

250 A

Rated breaking capacity at 500 V

250 A

Rated breaking capacity at 660/690 V

150 A

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

415 V

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

415 V

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

480 V

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

480 V

Coil voltage

415-480 Vac, 50/60 Hz

Contact configuration

1 NO

Continuous ampere rating

170 A

Drop-out voltage

AC operated: 0.6 - 0.3 x UC, AC operated

Overvoltage category

III

Duty factor

100 %

Number of contacts

1 NO

Emitted interference

According to EN 60947-1

Operation

Reversing

Interference immunity

According to EN 60947-1

Lifespan, mechanical

10,000,000 Operations (AC operated)

Pick-up voltage

0.8 - 1.1 V AC x Uc

Power consumption, pick-up, 50 Hz

52 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz

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

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

Screw size

M5, Terminal screw, Main cables

M3.5, Terminal screw, Control circuit cables

Power consumption, sealing, 50 Hz

7.1 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz

2.1 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz

Power consumption, sealing, 60 Hz

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

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

Terminal capacity (stranded)

1 x 16 mm², Main cables

Terminal capacity (flexible with ferrule)

2 x (0.75 - 10) mm², Main cables

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

1 x (0.75 - 16) mm², Main cables

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

Shock resistance

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

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

7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms

6.9 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms

3.5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10

ms

Terminal capacity (solid)

2 x (0.75 - 10) mm², Main cables

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

1 x (0.75 - 16) mm², Main cables

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

Terminal capacity (solid/stranded AWG)

Single 18 - 6, double 18 - 8, Main cables

18 - 14, Control circuit cables

Power consumption

11 kW

Tightening torque

1.2 Nm, Screw terminals, Control circuit cables

3.2 Nm, Screw terminals, Main 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)

350 A

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

45 A

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

25 A

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

25 A

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

25 A

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

25 A

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

15 A

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

13 A

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

13 A

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

13 A

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

13 A

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

10 A

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

40 A

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

40 A

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

40 A

Rated operational current for specified heat dissipation (In)

25 A

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

8.5 kW

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

11 kW

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

14.5 kW

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

3.5 kW

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

4 kW

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

6 kW

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

6.5 kW

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

7 kW

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

8 kW

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

8.5 kW

Rated operational power (NEMA)

11 kW

Rated operational voltage (Ue) at AC - max

690 V

Resistance per pole

2.7 m Ω

Static heat dissipation, non-current-dependent Pvs

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 protection rating (type 1 coordination) at 400 V

100 A gG/gL

Suitable for

Also motors with efficiency class IE3

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

Operating temperature

-40° to 60°C

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

45 A

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

43 A

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

40 A

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

15.5 kW

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

17.5 kW

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

14 kW

Actuating voltage

415 V 50 Hz, 480 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

Eaton.com/socialmedia