Product specifications

Eaton 272441

Catalog Number: 272441

Eaton Moeller® series DILH Contactor, Ith =Ie: 1714 A, RAW 250: 230 - 250 V 50 - 60 Hz/230 - 350 V DC, AC and DC operation, Screw connection DILH1400/22(RAW250)

General specifications

Product Name
Eaton Moeller® series DILH contactor

Catalog Number
272441

Model Code
DILH1400/22(RAW250)

EAN
4015082724412

Product Length/Depth
232 mm

Product Height
342 mm

Product Width
260 mm

Product Weight
14.4 kg

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

Catalog Notes
Contacts according to EN 50012

Powering Business Worldwide

defaultTaxonomyAttributeLabel

Accessories

Fitting options auxiliary contacts: on the side: 2 x DILM820-XHI11(V)-SI; 2 x DILM820-XHI11-SA

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

Resources

Catalogs

Switching and protecting motors - catalog

Product Range Catalog Switching and protecting motors

Characteristic curve

eaton-contactors-dilh-characteristic-curve.eps

eaton-contactors-short-time-loading-dilm-characteristic-curve-002.eps

Declarations of conformity

DA-DC-00004805.pdf

DA-DC-00004794.pdf

Drawings

eaton-contactors-mounting-dilm-dimensions.eps

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

eaton-contactors-dimensions-010.eps

eaton-contactors-dimensions-009.eps

eaton-contactors-mounting-dilm-3d-drawing-002.eps

eaton-contactors-3d-drawing.eps

eCAD model

DA-CE-ETN.DILH1400_22(RAW250)

Installation instructions

IL034039ZU2021_09.pdf

mCAD model

DA-CS-dil_h1400

DA-CD-dil_h1400

Wiring diagrams

eaton-contactors-contact-dilm-wiring-diagram-004.eps

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.

Fitted with:

Suppressor circuit in actuating electronics

Operating frequency

1000 mechanical Operations/h (AC operated)
1000 mechanical Operations/h (DC operated)

Pollution degree

3

Climatic proofing

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

Rated impulse withstand voltage (Uimp)

8000 V AC

Utilization category

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

Connection

Screw terminals

Ambient operating temperature - max

60 °C

Ambient operating temperature - min

-40 °C

Ambient storage temperature - max

80 °C

Ambient storage temperature - min

-40 °C

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

1462 A

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

3500 A

Equipment heat dissipation, current-dependent Pvid

0 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

63 W

Application

Mains contactors for resistive loads from 1000 A

Product category

Contactors

Electrical connection type of main circuit

Rail connection

Screwdriver size

2, Terminal screw, Control circuit cables, Pozidriv screwdriver

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

Voltage type

AC/DC

Degree of protection

IP00

Number of auxiliary contacts (normally closed contacts)

2

Number of auxiliary contacts (normally open contacts)

2

Number of contacts (normally closed) as main contact

0

Number of main contacts (normally open contact)

3

Rated breaking capacity at 1000 V

5800 A

Rated breaking capacity at 220/230 V

8200 A

Rated breaking capacity at 380/400 V

8200 A

Rated breaking capacity at 500 V

8200 A

Rated breaking capacity at 660/690 V

8200 A

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

250 V

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

230 V

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

250 V

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

230 V

Drop-out voltage

0.2 x US max - 0.6 x US min, DC operated
AC operated: 0.2 x US max - 0.6 x US min, AC operated

Overvoltage category

III

Behavior in marginal and transitional conditions

Sealing - Pick-up phase (0.7 x Uc min - 1.15 x Uc max): Contactor switches on with certainty
Sealing - Pick-up phase (0 - 0.7 x Uc min: Contactor does not switch on
Sealing - Voltage drops (0.2 - 0.6 x Uc min ≤12 ms: Time is bridged successfully
Sealing - Voltage drops (0.6 - 0.7 x Uc min: Contactor remains switched on
Sealing - Voltage interruptions (0 - 0.2 x Uc min ≤ 10 ms: Time is bridged successfully
Sealing - Excess voltage (1.15 - 1.3 x Uc max): Contactor remains switched on
Sealing - Voltage drops (0.2 - 0.6 x Uc min) > 12 ms: Drop-out of the contactor
Sealing - Voltage interruptions 0 - 0.2 x Uc min) > 10 ms: Drop-out of the contactor

Duty factor

100 %

Electromagnetic compatibility

Designed for operation in industrial environments. Its use in residential environments may cause radio-frequency interference, requiring additional noise suppression.

Lifespan, mechanical

5,000,000 Operations (AC operated)

5,000,000 Operations (DC operated)

Pick-up voltage

0.7 - 1.15 V DC x Us

0.7 - 1.15 V AC x Us

Power consumption, pick-up, 50 Hz

700 W, Pull-in power, Coil in a cold state and 1.0 x Us

800 VA, Pull-in power, Coil in a cold state and 1.0 x Us

Safe isolation

1000 V AC, Between coil and contacts, According to EN 61140

Power consumption, pick-up, 60 Hz

800 VA, Pull-in power, Coil in a cold state and 1.0 x Us

700 W, Pull-in power, Coil in a cold state and 1.0 x Us

Screw size

M3.5, Terminal screw, Control circuit cables

M12, Terminal screw, Main connections

Power consumption, sealing, 50 Hz

11.4 W, Coil in a cold state and 1.0 x Us

26.5 VA, Coil in a cold state and 1.0 x Us

Power consumption, sealing, 60 Hz

26.5 VA, Coil in a cold state and 1.0 x Us

11.4 W, Coil in a cold state and 1.0 x Us

Resistance

500 m Ω (Admissible transitional contact resistance - of the external control circuit device when actuating A11)

Switching capacity (auxiliary contacts, general use)

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

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

Switching capacity (auxiliary contacts, pilot duty)

A600, AC operated (UL/CSA)

P300, DC operated (UL/CSA)

Terminal capacity (flexible with ferrule)

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

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

Shock resistance

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

Terminal capacity (solid)

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

Terminal capacity (solid/stranded AWG)

18 - 14, Control circuit cables

Signal level

5 V - 15 V, PLC signal level (A3 - A4) to IEC/EN 61131-2 (type 2), Magnet systems

Terminal capacity (busbar)

80 mm width, Main connection

Switching capacity (main contacts, general use)

1600 A, Maximum motor rating (UL/CSA)

Power consumption

Control transformer with uk ≤ 7%

Tightening torque

35 Nm, Main cable connection screw/bolt
1.2 Nm, Screw terminals, Control circuit cables

Width across flats

18 mm

Rated control supply voltage (Us) at DC - max

250 V

Rated control supply voltage (Us) at DC - min

230 V

Rated insulation voltage (Ui)

1000 V

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

9840 A

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

1714 A

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

0 A

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

0 A

Rated operational current for specified heat dissipation (In)

1400 A

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

0 kW

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

0 kW

Rated operational power (NEMA)

0 kW

Rated operational voltage (Ue) at AC - max

1000 V

Static heat dissipation, non-current-dependent Pvs

6.5 W

Stripping length (control circuit cable)

10 mm

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

70 ms

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

40 ms

Special purpose rating of resistance air heating

1400 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)

1400 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)

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

1714 A

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

1533 A

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

1400 A

Actuating voltage

RAW 250: 230 - 250 V 50 - 60 Hz/230 - 350 V DC

Altitude

Max. 2000 m

Operating voltage at AC, 50 Hz - min

230 V

Operating voltage at AC, 50 Hz - max

250 V

Operating voltage at AC, 60 Hz - min

230 V

Operating voltage at AC, 60 Hz - max

250 V

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