Specifications

# Eaton 294012

## Catalog Number: 294012

Eaton Moeller® series DILK Contactor for capacitors, with series resistors, 20 kVAr, 400 V 50 Hz, 440 V 60 Hz



## General specifications

**Product Name**
Eaton Moeller® series DILK capacity contactor

**Catalog Number**
294012

**EAN**
4015082940126

**Product Length/Depth**
138 mm

**Product Height**
135 mm

**Product Width**
45 mm

**Product Weight**
0.51 kg

**Compliances**
CE Marked

**Certifications**
UL 508
IEC 60947-4-1
EN 60947-4-1
CSA Std. C22.2 No. 14-05
VDE
UL Category Control No.: NLDX
CSA Class No.: 3211-04
CSA File No.: 012528
CSA-C22.2 No. 60947-4-1-14
IEC/EN 60947
CSA
IEC/EN 60947-4-1
UL 60947-4-1
CE
UL
UL File No.: E29096

Powering Business Worldwide

## Features Functions

Fitted with:

Series resistors

## General

Application

Contactors for power factor correction

Degree of protection

IP00

Lifespan, electrical

150,000 Operations

Connection

Screw terminals

Operating frequency

120 Operations/h

Product category

DILK Contactors for capacitors

Protection

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

Voltage type

AC

## Climatic environmental conditions

Ambient operating temperature - min

-25 °C

Ambient operating temperature - max

60 °C

Ambient operating temperature (enclosed) - min

25 °C

Ambient operating temperature (enclosed) - max

40 °C

## Electro magnetic compatibility

Emitted interference

According to EN 60947-1

Interference immunity

According to EN 60947-1

## Terminal capacities

Terminal capacity (flexible with ferrule)

1 x (0.75 - 16) mm², Main cables

Terminal capacity (solid)

1 x (0.75 - 16) mm², Main cables

Terminal capacity (solid/stranded AWG)

18 - 6, Main cables

Terminal capacity (stranded)

1 x 16 mm², Main cables

## Electrical rating

### Rated operational current (Ie)

26 A at 525 V (three-phase capacitors, enclosed)
29 A at 690 V (three-phase capacitors, open)
29 A at 400 V (three-phase capacitors, open)
29 A at 525 V (three-phase capacitors, open)
26 A at 690 V (three-phase capacitors, enclosed)
29 A at 230 V (three-phase capacitors, open)
26 A at 230 V (three-phase capacitors, enclosed)
26 A at 400 V (three-phase capacitors, enclosed)

### Rated operational power at AC-6B, 220/230 V, 50 Hz

11 kW

### Rated operational power at AC-6B, 380/400 V, 50 Hz

20 kW

### Rated operational power at AC-6B, 525 V, 50 Hz

25 kW

### Rated operational power at AC-6B, 690 V, 50 Hz

33.3 kW

## Switching capacity

### 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)

## Magnet system

### Arcing time

10 ms

### Drop-out voltage

AC operated: 0.6 - 0.3 x UC, AC operated

### Duty factor

100 %

### Pick-up voltage

0.8 - 1.1 V AC x Uc

### Power consumption, pick-up, 50 Hz

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

### Power consumption, pick-up, 60 Hz

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

### Power consumption, sealing, 50 Hz

2.1 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
7.6 VA, 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
9.3 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz

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

400 V

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

400 V

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

440 V

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

440 V

### Rated control supply voltage (Us) at DC - min

0 V

Rated control supply voltage (Us) at DC - max

0 V

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

16 ms

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

22 ms

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

8 ms

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

14 ms

## Contacts

Making capacity without damping (I-peak value)

180 x Ie

Number of auxiliary contacts (normally closed contacts)

1

Number of auxiliary contacts (normally open contacts)

1

## Special purpose ratings

Special purpose rating of capacitor switching

28 A, 600 V 60 Hz 3phase, (UL/CSA)
28 A, 240 V 60 Hz 3phase, (UL/CSA)
20 kVar, 480 V 60 Hz 3phase, (UL/CSA)
30 kVar, 600 V 60 Hz 3phase, (UL/CSA)
12 kVar, 240 V 60 Hz 3phase, (UL/CSA)
28 A, 480 V 60 Hz 3phase, (UL/CSA)

## Design verification

Equipment heat dissipation, current-dependent Pvid

5.4 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

1.8 W

Rated operational current for specified heat dissipation (In)

29 A

Static heat dissipation, non-current-dependent Pvs

2.1 W

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

## Resources

Catalogs

SmartWire-DT Catalog

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

Product Range Catalog Switching and protecting motors

Declarations of conformity

DA-DC-00004814.pdf

DA-DC-00004785.pdf

Drawings

eaton-contactors-dilk-dimensions-004.eps

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

eaton-contactors-dilk-dimensions.eps

eaton-contactors-dilk-dimensions-002.eps

eaton-contactors-mounting-dilm-dimensions.eps

eaton-contactors-dilk-3d-drawing.eps

eCAD model

ETN.DILK20-11(400V50HZ,440V60HZ).edz

Installation instructions

IL03407038Z

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.

### 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.

### 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.

### Installation videos

WIN-WIN with push-in technology

### mCAD model

DA-CD-dil_m17_38

eaton-dilk12-25-drawing.dwg

DA-CS-dil_m17_38

eaton-dilk12-25-3d-model.stp

### Wiring diagrams

eaton-contactors-circuit-dilk-wiring-diagram-002.eps

### 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.

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