

# Eaton 029869

Catalog Number: 029869

Eaton Moeller® series DILER Contactor relay, 42 V 50/60 Hz, N/O = Normally open: 3 N/O, N/C = Normally closed: 1 NC, Screw terminals, AC operation

### General specifications



| Product Name                              | Catalog Number |
|-------------------------------------------|----------------|
| Eaton Moeller® series DILER Control relay | 029869         |
|                                           | EAN            |
|                                           | 4015080298694  |
| Product Length/Depth                      | Product Height |
| 52 mm                                     | 58 mm          |
| Product Width                             | Product Weight |
| 45 mm                                     | 0.17 kg        |

### Certifications

CE  
UL Category Control No.: NKCR  
CSA-C22.2 No. 14-05  
IEC/EN 60947-4-1  
UL  
UL 508  
UL File No.: E29184  
CSA File No.: 012528  
EN 60947-5-1  
VDE 0660  
CSA  
CSA Class No.: 3211-03  
IEC/EN 60947

## Features & Functions

### Features

Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module

### Fitted with:

Interlocked opposing contacts

## General

### Application

Contactor relays

### Lifespan, mechanical

10,000,000 Operations (AC operated)

### Mounting method

DIN-rail/screw

### Mounting position

As required (except vertical with terminals A1/A2 at the bottom)

### Operating frequency

9000 Operations/h

### Overvoltage category

III

### Pollution degree

3

### Product category

DILER Mini-contactors

### Protection

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

### Rated impulse withstand voltage (Uimp)

6000 V AC

### Shock resistance

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

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

### Voltage type

AC

## Climatic environmental conditions

### Ambient operating temperature - min

-25 °C

### Ambient operating temperature - max

50 °C

## Terminal capacities

### Terminal capacity (flexible with ferrule)

1 x (0.75 - 1.5) mm<sup>2</sup>

2 x (0.75 - 1.5) mm<sup>2</sup>

### Terminal capacity (solid)

Ambient operating temperature (enclosed) - min

25 °C

Ambient operating temperature (enclosed) - max

40 °C

Climatic proofing

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

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

1 x (0.75 - 2.5) mm<sup>2</sup>

2 x (0.75 - 2.5) mm<sup>2</sup>

Terminal capacity (solid/stranded AWG)

1 x (18 - 14)

2 x (18 - 14)

18 - 14

Stripping length (main cable)

8 mm

Screwdriver size

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

2, Terminal screw, Pozidriv screwdriver

Tightening torque

1.2 Nm, Screw terminals

## Electrical rating

Rated operational voltage (Ue) at AC - max

600 V

Rated insulation voltage (Ui)

690 V

Rated operational current (Ie)

2.5 A at 60 V, DC L/R ≤ 15 ms (with 2 contacts in series)

2.5 A at 24 V, DC L/R ≤ 15 ms (with 1 contact in series)

1.5 A at 110 V, DC L/R ≤ 15 ms (with 3 contacts in series)

0.5 A at 220 V, DC L/R ≤ 15 ms (with 3 contacts in series)

10 A

Rated operational current (Ie) at AC-15, 220 V, 230 V, 240 V

6 A

Rated operational current (Ie) at AC-15, 380 V, 400 V, 415 V

3 A

Rated operational current (Ie) at AC-15, 500 V

1.5 A

Safe isolation

300 V AC, Between auxiliary contacts, According to EN 61140

300 V AC, Between coil and auxiliary contacts, According to EN 61140

## Short-circuit rating

Short-circuit protection rating

10 A fast, 500V, Maximum fuse, Short-circuit rating without welding, Contacts

Short-circuit protection rating without welding

6 A gG/gL, 500 V, Max. Fuse, Contacts

## Switching capacity

Switching capacity (auxiliary contacts, general use)

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

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

Switching capacity (auxiliary contacts, pilot duty)

P300, DC operated (UL/CSA)

A600, AC operated (UL/CSA)

## Magnet system

Duty factor

100 %

Pick-up voltage

0.85 - 1.1 V AC x Uc (voltage tolerance - dual frequency coil 50/60 Hz)

0.8 - 1.1 V AC x Uc (voltage tolerance - single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz)

#### Power consumption, sealing, 50 Hz

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

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

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

#### Power consumption, sealing, 60 Hz

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

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

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

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

42 V

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

42 V

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

42 V

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

42 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

14 ms

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

21 ms

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

8 ms

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

18 ms

#### Switching time (AC operated, N/O, with auxiliary contact module, closing delay)

45 ms

## Contacts

#### Code number

31E

#### Control circuit reliability

$< 2 \lambda, < 1$  failure at 100,000,000 Operations (at  $U_e = 24$  V DC,  $U_{min} = 17$  V,  $I_{min} = 5.4$  mA)

#### Number of auxiliary contacts (change-over contacts)

0

#### Number of auxiliary contacts (normally closed contacts)

1

#### Number of auxiliary contacts (normally open contacts)

3

## Design verification

#### Equipment heat dissipation, current-dependent P<sub>vid</sub>

0 W

#### Heat dissipation capacity P<sub>diss</sub>

0 W

#### Heat dissipation per pole, current-dependent P<sub>vid</sub>

0.4 W

#### Rated operational current for specified heat dissipation (I<sub>n</sub>)

6 A

#### Static heat dissipation, non-current-dependent P<sub>vs</sub>

1.8 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

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.

### 10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

## Resources

### Catalogs

Product Range Catalog Switching and protecting motors

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

Switching and protecting motors - catalog

### Characteristic curve

[eaton-contactors-diler-relay-characteristic-curve.eps](#)

### Declarations of conformity

[DA-DC-00004763.pdf](#)

[DA-DC-00004748.pdf](#)

### Drawings

[eaton-contactors-dimensions-210x007.eps](#)

[eaton-contactors-dimensions-210x002.eps](#)

[eaton-contactors-dimensions-210x003.eps](#)

[eaton-contactors-dimensions-210x001.eps](#)

[eaton-contactors-dimensions-210x005.eps](#)

[eaton-tripping-devices-mounting-diler-contactor-relay-symbol.eps](#)

### eCAD model

[ETN.029869.edz](#)

### Installation instructions

[IL03407009Z](#)

### mCAD model

[DA-CD-dil\\_em](#)

[DA-CS-dil\\_em](#)

### System overview

[eaton-contactors-accessory-diler-relay-system-overview.eps](#)

### Wiring diagrams

[eaton-contactors-contact-diler-relay-wiring-diagram-002.eps](#)

10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.



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