Specifications

# Eaton 199261

## Catalog Number: 199261

Eaton Moeller® series DILMP Contactor, 4 pole, AC operation, AC-1: 22 A, 24 V 50/60 Hz, Push in terminals



## General specifications

**Product Name**
Eaton Moeller® series DILMP 4-pole contactor

**Catalog Number**
199261

**EAN**
4015081973453

**Product Length/Depth**
75 mm

**Product Height**
68 mm

**Product Width**
45 mm

**Product Weight**
0.225 kg

**Certifications**
IEC/EN 60947
VDE 0660

**Catalog Notes**
Also tested according to AC-3e.

Powering Business Worldwide

## Features Functions

### Number Of Poles

Four-pole

## General

### Application

Contactors for 4 pole electric consumers

### Degree of protection

IP20

### Lifespan, mechanical

10,000,000 Operations (AC operated)

### Connection

Push in terminals

### Operating frequency

5000 mechanical Operations/h (AC operated)

### Overvoltage category

III

### Pollution degree

3

### Product category

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

### Residual current

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

### Resistance per pole

2.5 m Ω

### Utilization category

AC-3: Normal AC induction motors: starting, switch off during running

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

### Voltage type

AC

## Ambient conditions, mechanical

### Shock resistance

7 g, N/O auxiliary contact, Mechanical, according to IEC/EN

## Climatic environmental conditions

### Ambient operating temperature - min

-25 °C

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

### Ambient operating temperature - max

60 °C

### Ambient operating temperature (enclosed) - min

-25 °C

### Ambient operating temperature (enclosed) - max

40 °C

### Ambient storage temperature - min

-40 °C

### Ambient storage temperature - max

80 °C

### Climatic proofing

Damp heat, constant, to IEC 60068-2-3

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

## Electro magnetic compatibility

### Interference immunity

According to EN 60947-1

## Terminal capacities

### Terminal capacity (flexible with ferrule)

1 x (0.5 - 2.5) mm²

2 x (0.5 - 1.5) mm²

### Terminal capacity (flexible)

1 x (0.5 - 2.5) mm²

2 x (0.5 - 2.5) mm²

### Terminal capacity (solid)

1 x (0.5 - 2.5) mm²

2 x (0.5 - 2.5) mm²

### Terminal capacity (solid/stranded AWG)

20 - 14

### Stripping length (main cable)

10 mm

### Stripping length (control circuit cable)

10 mm

### Screwdriver size

3 x 0.5 mm, Terminal screw

## Electrical rating

### Rated breaking capacity at 220/230 V

120 A

## Short-circuit rating

### Short-circuit current rating (basic rating)

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

5 kA, SCCR (UL/CSA)

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 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 DC-1, 60 V

22 A

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

22 A

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

6 A

Rated insulation voltage (Ui)

690 V

Rated making capacity up to 690 V (cos phi to IEC/EN 60947)

144 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

60 A, max. CB, 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

## Conventional thermal current Ith

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

## Switching capacity

Switching capacity (main contacts, general use)

20 A, Maximum motor rating (UL/CSA)

Switching capacity (auxiliary contacts, general use)

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

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

## Magnet system

Arcing time

10 ms

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 voltage (Ue) at AC - max

690 V

Drop-out voltage

AC operated: 0.6 - 0.4 x UC, AC operated

Duty factor

100 %

Pick-up voltage

0.8 - 1.1 V AC x Uc

Power consumption, pick-up, 50 Hz

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

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

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

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

4 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

24 V

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

24 V

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

24 V

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

24 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

15 ms

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

21 ms

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

9 ms

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

18 ms

## Motor rating

Assigned motor power at 115/120 V, 60 Hz, 1-phase

1 HP

Assigned motor power at 200/208 V, 60 Hz, 3-phase

5 HP

Assigned motor power at 230/240 V, 60 Hz, 1-phase

2 HP

Assigned motor power at 230/240 V, 60 Hz, 3-phase

5 HP

Assigned motor power at 460/480 V, 60 Hz, 3-phase

10 HP

Assigned motor power at 575/600 V, 60 Hz, 3-phase

10 HP

## Communication

Connection to SmartWire-DT

No

## Contacts

Number of contacts (normally closed contacts)

0

Number of contacts (normally open contacts)

0

Number of auxiliary contacts (normally closed contacts)

0

Number of auxiliary contacts (normally open contacts)

0

## Safety

Safe isolation

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

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

## Special purpose ratings

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 definite purpose rating

15 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)

90 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)

Special purpose rating of elevator control

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

11 A, 480 V 60 Hz 3-ph, (UL/CSA)

2 HP, 200 V 60 Hz 3-ph, (UL/CSA)

3 HP, 240 V 60 Hz 3-ph, (UL/CSA)

7.8 A, 200 V 60 Hz 3-ph, (UL/CSA)

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

9.6 A, 240 V 60 Hz 3-ph, (UL/CSA)

7.5 HP, 480 V 60 Hz 3-ph, (UL/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)

## Design verification

### Equipment heat dissipation, current-dependent Pvid

3 W

### Heat dissipation capacity Pdiss

0 W

### Heat dissipation per pole, current-dependent Pvid

1 W

### Static heat dissipation, non-current-dependent Pvs

1.4 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

## Resources

### Catalogs

Product Range Catalog Switching and protecting motors

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

SmartWire-DT Catalog

### Declarations of conformity

DA-DC-00004789.pdf

DA-DC-00004811.pdf

### Drawings

eaton-contactors-dimensions-007.eps

### eCAD model

ETN.199261.edz

### Installation videos

WIN-WIN with push-in technology

### mCAD model

dil_m7_15_pi.stp

dil_m7_15_pi.dwg

### Wiring diagrams

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

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.

### 10.13 Mechanical function

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



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