

# Eaton 210072

Catalog Number: 210072

Eaton Moeller® series Z5 Overload relay, Ir= 95 - 125 A, 1 N/O, 1 N/C, For use with: DILM250

## General specifications



### Product Name

Eaton Moeller® series Z5 Thermal  
overload relay

### Catalog Number

210072

### Model Code

Z5-125/FF250

### EAN

4015082100728

### Product Length/Depth

146 mm

### Product Height

167 mm

### Product Width

128 mm

### Product Weight

1.731 kg

### Certifications

IEC/EN 60947

IEC/EN 60947-4-1

CE

UL

CSA File No.: 012528

CSA Class No.: 3211-03

CSA-C22.2 No. 60947-4-1-14

UL File No.: E29184

CSA

UL 60947-4-1

UL Category Control No.: NKCR

VDE 0660

## Features

Phase-failure sensitivity (according to IEC/EN 60947, VDE 0660 Part 102)

Reset pushbutton manual/auto

Test/off button

Trip-free release

### 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.

## Catalogs

Product Range Catalog Switching and protecting motors

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

## Characteristic curve

[eaton-tripping-z5-overload-relay-characteristic-curve-004.eps](#)

[eaton-tripping-z5-overload-relay-characteristic-curve.eps](#)

## Declarations of conformity

[DA-DC-00004846.pdf](#)

[DA-DC-00004856.pdf](#)

## Drawings

[eaton-tripping-devices-overload-relay-z5-overload-relay-dimensions-002.eps](#)

[eaton-tripping-devices-overload-relay-z5-overload-relay-3d-drawing.eps](#)

## eCAD model

[ETN.210072.edz](#)

## Installation instructions

[IL03407081Z](#)

[eaton-overload-relays-z5-zb150-il03407006z.pdf](#)

[IL03407140Z2010\\_10](#)

## Manuals and user guides

[DA-MN-h1476dgb](#)

## mCAD model

[DA-CS-z5\\_ff250](#)

[DA-CD-z5\\_ff250](#)

## Specifications and datasheets

[Eaton Specification Sheet - 210072](#)

## Wiring diagrams

[eaton-general-release-zeb-overload-relay-wiring-diagram.eps](#)

[eaton-tripping-devices-overload-relay-zeb-overload-relay-wiring-diagram.eps](#)

### 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.

### Pollution degree

3

### Class

CLASS 10 A

### Climatic proofing

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

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

### Rated impulse withstand voltage (U<sub>imp</sub>)

8000 V AC

4000 V (auxiliary and control circuits)

### Rated operational current (I<sub>e</sub>) at AC-15, 220 V, 230 V, 240 V

1.5 A

### Rated operational current (I<sub>e</sub>) at AC-15, 380 V, 400 V, 415 V

0.9 A

### Rated operational current (I<sub>e</sub>) at DC-13, 110 V

0.4 A

### Rated operational current (I<sub>e</sub>) at DC-13, 220 V, 230 V

0.2 A

Rated operational current (I<sub>e</sub>) at DC-13, 24 V

0.9 A

Rated operational current (I<sub>e</sub>) at DC-13, 60 V

0.75 A

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

125 A

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

0 W

Stripping length (control circuit cable)

8 mm

Voltage rating - max

600 VAC

Product category

Overload relay Z5

Protection

With terminal cover, Protection against direct contact when actuated from front (EN 50274)

Adjustable current range - max

125 A

Adjustable current range - min

95 A

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

Conventional thermal current I<sub>th</sub> of auxiliary contacts (1-pole, open)

6 A

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

25.5 W

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

0 W

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

8.5 W

Number of auxiliary contacts (change-over contacts)

0

Number of auxiliary contacts (normally closed contacts)

1

Number of auxiliary contacts (normally open contacts)

1

Number of contacts (normally closed contacts)

1

Number of contacts (normally open contacts)

1

Overload release current setting - max

125 A

Overload release current setting - min

95 A

Rated operational voltage (U<sub>e</sub>) - max

1000 V

Rated operational current (I<sub>e</sub>) at AC-15, 120 V

1.5 A

Electrical connection type of main circuit

Screw connection

Reset function

Push-button

Automatic

Screwdriver size

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

2, Terminal screw, Control circuit cables, Pozidriv screwdriver

Mounting method

Direct attachment

Direct mounting

Separate mounting

Degree of protection

IP00

Overvoltage category

III

Safe isolation

440 V, Between auxiliary contacts and main contacts, According to EN 61140

500 V AC, Between main circuits, According to EN 61140

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

#### Screw size

M3.5, Terminal screw, Control circuit cables

M10 x 35, Terminal screw, Main connections

#### Shock resistance

10 g, Mechanical, Sinusoidal, Shock duration 10 ms

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

10 kA, SCCR (UL/CSA)

500 A, max. CB, SCCR (UL/CSA)

500 A Class J, max. Fuse, SCCR (UL/CSA)

#### Switching capacity (auxiliary contacts, pilot duty)

B600 at opposite polarity, AC operated (UL/CSA)

R300, DC operated (UL/CSA)

B300 at opposite polarity, AC operated (UL/CSA)

#### Short-circuit protection rating

315 A gG/gL, Fuse, Type "1" coordination

250 A gG/gL, Fuse, Type "2" coordination

Max. 6 A gG/gL, fuse, Without welding, Auxiliary and control circuits

#### Suitable for

Branch circuits, (UL/CSA)

#### Temperature compensation

$\leq 0.25$  %/K, residual error for  $T > 40^\circ$

Continuous

#### Terminal capacity (busbar)

25 mm width, Main connection

#### Terminal capacity (flexible with cable lug)

185 mm<sup>2</sup>

#### Terminal capacity (flexible with ferrule)

2 x (0.75 - 2.5) mm<sup>2</sup>, Control circuit cables

1 x (0.75 - 2.5) mm<sup>2</sup>, Control circuit cables

#### Terminal capacity (solid)

1 x (0.75 - 4) mm<sup>2</sup>, Control circuit cables

2 x (0.75 - 4) mm<sup>2</sup>, Control circuit cables

#### Terminal capacity (solid/stranded AWG)

2/0 - 500 MCM, Main cables

2 x (18 - 14), Control circuit cables

Terminal capacity (stranded with cable lug)

185 mm<sup>2</sup>

Tightening torque

1.2 Nm, Screw terminals, Control circuit cables

18 Nm, Main cable connection screw/bolt

Width across flats

16 mm (Hexagon head spanner SW)



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