Specifications

# Eaton 360046



## Catalog Number: 360046

Eaton Moeller series HLR Solid-state relay, 3-phase, 20 A, 42 - 660 V, DC

### General specifications

**Product Name**
Eaton Moeller series HLR solid state relay

**Catalog Number**
360046

**EAN**
4015081998135

**Product Length/Depth**
103 mm

**Product Height**
110 mm

**Product Width**
54 mm

**Product Weight**
0.505 kg

**Compliances**
CE Marked
RoHS Compliant

**Certifications**
CE
UL 508
EAC
CCC
UL-File No.: E251034, UL report applies to both US and Canada

Powering Business Worldwide

## Product specifications

### Type

Solid-state relay

### Operating temperature - max

80 °C

### Operating temperature - min

-40 °C

### 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

Please enquire

### 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

## Resources

### Catalogs

eaton-switching-and-protecting-motors-product-range-catalog-ca034001en-en-us.pdf

### Declarations of conformity

DA-DC-00003890.pdf

DA-DC-00004197.pdf

### Installation instructions

IL034110ZU.pdf

### Installation videos

Eaton's HLR Solid State Relays

### mCAD model

hlr20_3dc.stp

hlr20_3dc.dwg

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.

### Ambient storage temperature - max

100 °C

### Ambient storage temperature - min

-40 °C

### Phase

3

### Rated operational current (Ie) at AC-51

20 A

### Rated operational current (Ie) at AC-53A

10 A

### Rated operational current (Ie) at AC-53B

0 A

### Rated operational current for specified heat dissipation (In)

20 A

### Rated operational power at 220/230 V, 50 Hz

2.2 kW

Rated operational power at 400 V, 50 Hz

4 kW

Rated operational voltage (Ue) at AC - max

660 V

Rated operational voltage (Ue) at AC - min

42 V

Static heat dissipation, non-current-dependent Pvs

0 W

Voltage type

DC

Rated operational power at 230 V, 60 Hz

3 HP

Rated operational power at 480 V, 60 Hz

7.5 HP

Rated operational power at 600 V, 60 Hz

10 HP

Frequency rating

45 Hz - 65 Hz

Series

HLR

Equipment heat dissipation, current-dependent Pvid

58 W

Heat dissipation per pole, current-dependent Pvid

19.3 W

Number of phases

3

Number of pilot lights

1

Operating voltage - max.

660 V

Operating voltage - min.

42 V

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

0 V

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

0 V

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

0 V

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

0 V

Rated control supply voltage (Us) at DC - max

32 V

Rated control supply voltage (Us) at DC - min

5 V

Rated operational current (Ie) at AC-1

0 A

Rated operational current (Ie) at AC-3

0 A

Air discharge

8 kV (according to IEC/EN 61000-4-2)

Altitude

9

Burst Impulse

Main: 2 kV, 5 kHz PC 1 (according to IEC/EN 61000-4-4)
Control: 1 kV, 5 kHz PC 1 (according to IEC/EN 61000-4-4)

Climatic proofing

95% relative humidity non-condensing at 40°C

Contact discharge

4 kV (according to IEC/EN 61000-4-2)

Degree of protection

IP20

Delay time

1/2 period + 500 microseconds at 24 V DC

Electrical connection type of main circuit

Screw connection

Electromagnetic fields

10 V/m, 80 - 1000 MHz and 1.4 - 2.0 GHz, PC 1 (according to IEC/EN 61000-4-3)
10 V/m, 2.0 - 2.7 GHz, PC 1 (according to IEC/EN 61000-4-3)

Features

Modular version

Functions

Switching at zero-crossing

Input current

29.5 mA at 24 V DC

### Mounting position

Mount device in specified orientation and do not obstruct the heatsink

### Pollution degree

2

### Radio interference class

Class A

### Overvoltage category

III

### Screwdriver size

Main: Pozidriv 2

Control: Pozidriv 1

### Shock resistance

15/11 g/ms (according to EN 50155, EN 61373)

### Tightening torque

Main: 2 Nm (17.7 lb-in)

Control: 0.5 Nm (4.4 lb-in)

### Vibration resistance

2 g/axis (2-100 Hz, IEC 60068-2-6, EN 50155, EN 61373)

### Drop-out time

< 20 ms

### Drop-out voltage

1 V DC

### Electrical connection type for auxiliary- and control-current circuit

Screw connection

### Fitted with:

LED indication

### Immunity to line-conducted interference

10 V/m, 0.15 - 80 MHz, PC 1 (according to IEC/EN 61000-4-6)

### Pick-up voltage

4.8 V DC

### Rated impulse withstand voltage (Uimp)

6 kV (1.2/50 µs)

### Terminal capacity (flexible with ferrule)

Main: 1 x 1-4 mm², 2 x 1-4 mm²

Control: 1 x 0.5-2.5 mm², 2 x 0.5-2.5 mm²

### Terminal capacity (solid)

Main: 1 x 2.5-6 mm², 2 x 2.5-6 mm²

Control: 1 x 0.5-2.5 mm², 2 x 0.5-2.5 mm²

### Terminal capacity (solid/stranded AWG)

Main: 1 x 14-10, 2 x 14-10

Control: 1 x 18-12, 2 x 18-12

### Terminal capacity (stranded)

Main: 1 x 2.5-6 mm², 2 x 2.5-6 mm²

Control: 1 x 0.5-2.5 mm², 2 x 0.5-2.5 mm²

### Rated conditional short-circuit current (Iq) (type 2 coordination) at 230 V

100 kA, "FWP-32G22FI"

### Rated conditional short-circuit current Iq (type 2 coordination) @ 380/400/415 V

100 kA, "FWP-32G22FI"

### Short-circuit current rating 600 Y/347 V, SCCR (UL/CSA)

100 kA, 30A Class J or CC

### Rated conditional short-circuit current (Iq) (type 1 coordination) at 230 V

15 kA, "FAZ-C20/3"

### Rated conditional short-circuit current Iq (type 1 coordination) @ 380/400/415 V

15 kA, "FAZ-C20/3"

### Model

Other

### Voltage type of operating voltage

AC

### Operating voltage at AC, 50 Hz - min

42 V

### Operating voltage at AC, 50 Hz - max

600 V

### Operating voltage at AC, 60 Hz - min

42 V

### Operating voltage at AC, 60 Hz - max

600 V

### Operating voltage at DC - min

0 V

### Operating voltage at DC - max

0 V

### Electric connection type

Screw connection




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