Specifications

Eaton 360053



Catalog Number: 360053

Eaton Moeller series HLR Solid-state relay, Hockey Puck, 1-phase, 50 A, 42 - 660 V, DC

General specifications

Product Name
Eaton Moeller series HLR solid state relay

Catalog Number
360053

EAN
4015081998203

Product Length/Depth
28.8 mm

Product Height
58.2 mm

Product Width
44.8 mm

Product Weight
0.06 kg

Compliances
CE Marked
RoHS Compliant

Certifications
CE
UL 508
EAC
CCC
UL-File No.: E338590
CSA-File No.: 603498

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

IL034111ZU.pdf

Installation videos

Eaton's HLR Solid State Relays

mCAD model

hlr25_50_1hdc.dwg

hlr25_50_1hdc.stp

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

1

Rated operational current (Ie) at AC-51

50 A

Rated operational current (Ie) at AC-53A

15 A

Rated operational current (Ie) at AC-53B

0 A

Rated operational current for specified heat dissipation (In)

50 A

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

56 W

Heat dissipation per pole, current-dependent Pvid

56 W

Number of phases

1

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

4 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

Electrical connection type of main circuit

Screw connection

Electromagnetic fields

10 V/m, 80 - 1000 MHz and 1.4 - 2.0 GHz, PC 1
3 V/m, 2.0 - 2.7 GHz, PC 1

Functions

Switching at zero-crossing

Input current

< 12 mA

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: 2.4 Nm (21.2 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

< 1/2 period

Drop-out voltage

1.2 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

3.5 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

10 kA, "FWP-50G22FI"

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

10 kA, "FWP-50G22FI"

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

65 kA, 30A Class J

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

15 kA, "FAZ-C50/1"

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

15 kA, "FAZ-C50/1"

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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