



< HLR SOLID STATE RELAYS

360039



Overview



Specifications



Resources

Questions

General specifications



Features & Functions



General



Climatic environmental conditions



Electromagnetic compatibility



Terminal capacities



Electrical rating



Short-circuit rating



Control circuit



Motor rating



Design verification



GENERAL SPECIFICATIONS

PRODUCT NAME

Eaton Moeller series HLR solid state relay

CATALOG NUMBER

360039

MODEL CODE

HLR25/1(DC)230V

EAN

4015081998074

PRODUCT LENGTH/DEPTH

103.5 mm

PRODUCT HEIGHT

110 mm

PRODUCT WIDTH

17.8 mm

PRODUCT WEIGHT

.205 kg

COMPLIANCESCE Marked
RoHS Compliant**CERTIFICATIONS**CE
UL 508
EAC

FEATURES & FUNCTIONS

FEATURES	Modular version
FUNCTIONS	Switching at zero-crossing
ELECTRICAL CONNECTION TYPE FOR AUXILIARY- AND CONTROL-CURRENT CIRCUIT	Screw connection
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection

GENERAL

DEGREE OF PROTECTION	IP20
FREQUENCY RATING	45 Hz - 65 Hz
MOUNTING POSITION	Mount device in specified orientation and do not use heatsink
NUMBER OF PHASES	1
NUMBER OF PILOT LIGHTS	1
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	2
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6 kV (1.2/50 µs)
SERIES	HLR

SHOCK RESISTANCE

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

TYPE

Solid-state relay

VIBRATION RESISTANCE

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

VOLTAGE TYPE

DC

CLIMATIC ENVIRONMENTAL CONDITIONS**ALTITUDE**

0 - 1000 m (Above 1000 m derate linearly by 100 m up to a maximum of 2000 m)

AMBIENT STORAGE TEMPERATURE - MIN -40 °C**AMBIENT STORAGE TEMPERATURE - MAX** 100 °C**CLIMATIC PROOFING**

95% relative humidity non-condensing at 40°C

OPERATING TEMPERATURE - MIN

-40 °C

OPERATING TEMPERATURE - MAX

80 °C

ELECTROMAGNETIC COMPATIBILITY**AIR DISCHARGE**

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

BURST IMPULSEMain: 2 kV, 5 kHz PC 1 (according to IEC/EN 61000-4-2)
Control: 1 kV, 5 kHz PC 1 (according to IEC/EN 61000-4-2)**CONTACT DISCHARGE**

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

**IMMUNITY TO LINE-CONDUCTED
INTERFERENCE**

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

RADIO INTERFERENCE CLASS

Class A

TERMINAL CAPACITIES**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**TIGHTENING TORQUE**Main: 2 Nm (17.7 lb-in)
Control: 0.5 Nm (4.4 lb-in)**SCREWDRIVER SIZE**Main: Pozidriv 2
Control: Pozidriv 1**ELECTRICAL RATING****OPERATING VOLTAGE - MAX.**

230 V

OPERATING VOLTAGE - MIN.

230 V

**RATED OPERATIONAL CURRENT (IE) AT AC-
1**

0 A

RATED OPERATIONAL CURRENT (IE) AT AC- 0 A
3

RATED OPERATIONAL CURRENT (IE) AT AC- 25 A
51

RATED OPERATIONAL CURRENT (IE) AT AC- 5 A
53A

RATED OPERATIONAL CURRENT (IE) AT AC- 0 A
53B

RATED OPERATIONAL VOLTAGE (UE) AT AC 230 V
- MIN

RATED OPERATIONAL VOLTAGE (UE) AT AC 230 V
- MAX

SHORT-CIRCUIT RATING

RATED CONDITIONAL SHORT-CIRCUIT CURRENT, TYPE 1, 600 V/347 V 100 kA

RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 230 V 100 kA

RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 380 V, 400 V, 415 V 100 kA

CONTROL CIRCUIT

DELAY TIME 1/2 period + 500 microseconds at 24 V DC

DROP-OUT TIME 1/2 period + 500 microseconds at 24 V DC

DROP-OUT VOLTAGE 1 V DC

INPUT CURRENT

10.5 mA at 24 V DC

PICK-UP VOLTAGE

3 V DC

**RATED CONTROL SUPPLY VOLTAGE (US)
AT AC, 50 HZ - MIN**

0 V

**RATED CONTROL SUPPLY VOLTAGE (US)
AT AC, 50 HZ - MAX**

0 V

**RATED CONTROL SUPPLY VOLTAGE (US)
AT AC, 60 HZ - MIN**

0 V

**RATED CONTROL SUPPLY VOLTAGE (US)
AT AC, 60 HZ - MAX**

0 V

**RATED CONTROL SUPPLY VOLTAGE (US)
AT DC - MIN**

3 V

**RATED CONTROL SUPPLY VOLTAGE (US)
AT DC - MAX**

32 V

MOTOR RATING**HORSEPOWER**

2 HP (230 V), 3 HP (480 V), 3 HP (600 V)

**RATED OPERATIONAL POWER AT 220/230
V, 50 HZ**

.37 kW

**RATED OPERATIONAL POWER AT 400 V, 50
HZ**

.75 kW

DESIGN VERIFICATION**EQUIPMENT HEAT DISSIPATION, CURRENT-
DEPENDENT PVID**

25 W

HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID 25 W

RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) 25 A

STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS 0 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 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 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 calculation. Eaton will provide heat dissipation devices.

10.11 SHORT-CIRCUIT RATING

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

10.12 ELECTROMAGNETIC COMPATIBILITY

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

10.13 MECHANICAL FUNCTION

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

Resources >

How to buy from Eaton



Questions before you buy

Contact us via web form by clicking the link above, or call us: +44 (0) 1753 608 700 option 2, then option 1

