

< HLR SOLID STATE RELAYS
360038


Overview


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GENERAL SPECIFICATIONS

PRODUCT NAME	Eaton Moeller series HLR solid state relay
CATALOG NUMBER	360038
MODEL CODE	HLR15/1(DC)230V
EAN	4015081998067
PRODUCT LENGTH/DEPTH	103.5 mm
PRODUCT HEIGHT	110 mm
PRODUCT WIDTH	17.8 mm
PRODUCT WEIGHT	.205 kg
COMPLIANCES	CE Marked RoHS Compliant
CERTIFICATIONS	CE UL 508 EAC
MODEL CODE	HL R15/1(DC)230V

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
heat sink

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, EN 61373)
VOLTAGE TYPE	DC

CLIMATIC ENVIRONMENTAL CONDITIONS

ALTITUDE	0 - 1000 m (Above 1000 m derate linearly by 1 % per 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 IMPULSE	Main: 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)

RADIATION	10 V/m, 80 - 1000 MHz and 1.4 - 2.0 GHz, PC 1
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ELECTROMAGNETIC FIELDS	3 V/m, 2.0 - 2.7 GHz, PC 1
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 mm ² , 2 x 1-4 mm ² Control: 1 x 0.5-2.5 mm ² , 2 x 0.5-2.5 mm ²
TERMINAL CAPACITY (SOLID)	Main: 1 x 2.5-6 mm ² , 2 x 2.5-6 mm ² Control: 1 x 0.5-2.5 mm ² , 2 x 0.5-2.5 mm ²
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 mm ² , 2 x 2.5-6 mm ² Control: 1 x 0.5-2.5 mm ² , 2 x 0.5-2.5 mm ²
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-1

RATED OPERATIONAL CURRENT (IE) AT AC-3	0 A
RATED OPERATIONAL CURRENT (IE) AT AC-51	20 A
RATED OPERATIONAL CURRENT (IE) AT AC-53A	5 A
RATED OPERATIONAL CURRENT (IE) AT AC-53B	0 A
RATED OPERATIONAL VOLTAGE (UE) AT AC - MIN	230 V
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	230 V

SHORT-CIRCUIT RATING

RATED CONDITIONAL SHORT-CIRCUIT CURRENT, TYPE 1, 600 Y/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	40.2 mA at 24 V DC
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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	1 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	21 W
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HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	21 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	20 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 need evaluated.
10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear need 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 need 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 need evaluated.
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear need 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 specifications for switchgear must be observed.

10.12 ELECTROMAGNETIC COMPATIBILITY

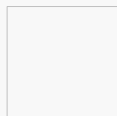
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10.13 MECHANICAL FUNCTION

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

Resources >

How to buy from Eaton



Questions before you buy

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