

< **HLR SOLID STATE RELAYS**
360054


Overview


Specifications


Resources

Questions be

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 360054

MODEL CODE HLR50/1H(DC)600V/S

EAN 4015081998210

PRODUCT LENGTH/DEPTH 28.8 mm

PRODUCT HEIGHT 58.2 mm

PRODUCT WIDTH 44.8 mm

PRODUCT WEIGHT .06 kg

COMPLIANCES CE Marked
RoHS Compliant

CERTIFICATIONS CE
UL 508
EAC
CCC

MODEL CODE	HLR50/1H(DC)600V/S
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FEATURES & FUNCTIONS

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

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

IMMUNITY TO LINE-CONDUCTED INTERFERENCE	10 V/m, 0.15 - 80 MHz, PC 1 (according to IEC 61000-4-6)
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RADIO INTERFERENCE CLASS	Class A
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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
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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
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TERMINAL CAPACITY (SOLID/STRANDED AWG)	Main: 1 x 14-10, 2 x 14-10 Control: 1 x 18-12, 2 x 18-12
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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
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TIGHTENING TORQUE	Main: 2.4 Nm (21.2 lb-in) Control: 0.5 Nm (4.4 lb-in)
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SCREWDRIVER SIZE	Main: Pozidriv 2 Control: Pozidriv 1
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ELECTRICAL RATING

OPERATING VOLTAGE - MAX.	660 V
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OPERATING VOLTAGE - MIN.	42 V
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RATED OPERATIONAL CURRENT (IE) AT AC-1	0 A
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RATED OPERATIONAL CURRENT (IE) AT AC-3	0 A
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RATED OPERATIONAL CURRENT (IE) AT AC-51	50 A
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RATED OPERATIONAL CURRENT (IE) AT AC-53A	15 A
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RATED OPERATIONAL CURRENT (IE) AT AC-53B	0 A
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RATED OPERATIONAL VOLTAGE (UE) AT AC - MIN	42 V
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RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	660 V
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SHORT-CIRCUIT RATING

RATED CONDITIONAL SHORT-CIRCUIT CURRENT, TYPE 1, 600 Y/347 V	65 kA
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RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 230 V	10 kA
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RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 380 V, 400 V, 415 V	10 kA
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CONTROL CIRCUIT

DELAY TIME	1/2 period
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DROP-OUT TIME	< 1/2 period
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DROP-OUT VOLTAGE	1.2 V DC
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INPUT CURRENT	< 12 mA
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PICK-UP VOLTAGE	3.5 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	4 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	32 V

MOTOR RATING

HORSEPOWER	3 HP (230 V), 7.5 HP (480 V), 10 HP (600 V)
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DESIGN VERIFICATION

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	52 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	52 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	50 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	Is the panel builder's responsibility.

STRENGTH

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

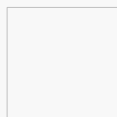
Is the panel builder's responsibility. The specific switchgear must be observed.

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

