

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
	Model Code	HLR50/1H(DC)600V
	EAN	4,01508E+12
	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
Features & Functions	Functions	Switching at zero-crossing
	Electrical connection type for auxiliary- and control-current circuit	Screw connection
General	Electrical connection type of main circuit	
	Degree of protection	IP20
	Frequency rating	45 Hz - 65 Hz
	Mounting position	Mount device in specified orientation and do not obstruct the heatsink
	Number of phases	1
	Number of pilot lights	
	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% of FLC 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	
	Operating temperature - max	80 °C
Electromagnetic compatibility	Air discharge	8 kV (according to IEC/EN 61000-4-2) 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)
	Burst Impulse	4 kV (according to IEC/EN 61000-4-2)
	Contact discharge	10 V/m, 80 - 1000 MHz and 1.4 - 2.0 GHz, PC 1
	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/EN 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)	
	Tightening torque	Main: 2.4 Nm (21.2 lb-in) Control: 0.5 Nm (4.4 lb-in)
	Screwdriver size	Main: Pozidriv 2 Control: Pozidriv 1

Electrical rating	Operating voltage - max.	660 V
	Operating voltage - min.	42 V
	Rated operational current (Ie) at AC-1	12:00 am
	Rated operational current (Ie) at AC-3	
	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	
	Rated operational voltage (Ue) at AC - min	
	Rated operational voltage (Ue) at AC - max	
	Rated conditional short-circuit current, type 1, 600 Y/347 V	65 kA
Short-circuit rating	Rated conditional short-circuit current (Iq), type 2, 230 V	10 kA
	Rated conditional short-circuit current (Iq), type 2, 380 V, 400 V, 415 V	
Control circuit	Delay time	1/2 period
	Drop-out time	< 1/2 period
	Drop-out voltage	1.2 V DC
	Input current	< 12 mA
	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	
	Rated control supply voltage (Us) at AC, 60 Hz - min	
	Rated control supply voltage (Us) at AC, 60 Hz - max	
	Rated control supply voltage (Us) at DC - min	4 V
Motor rating	Rated control supply voltage (Us) at DC - max	32 V
	Horsepower	3 HP (230 V), 7.5 HP (480 V), 10 HP (600 V)
Design verification	Equipment heat dissipation, current-dependent Pvid	56 W
	Heat dissipation per pole, current-dependent Pvid	
	Rated operational current for specified heat dissipation (In)	
	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	
	10.2.3.2 Verification of resistance of insulating materials to normal heat	
	10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects	
	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	
	10.2.7 Inscriptions	
	10.3 Degree of protection of assemblies	
	10.4 Clearances and creepage distances	
	10.5 Protection against electric shock	
	10.6 Incorporation of switching devices and components	

10.7 Internal electrical circuits and connections Is the panel builder's responsibility.

10.8 Connections for external conductors

10.9.2 Power-frequency electric strength

10.9.3 Impulse withstand voltage

10.9.4 Testing of enclosures made of insulating material

10.10 Temperature rise

10.11 Short-circuit rating

10.12 Electromagnetic compatibility

10.13 Mechanical function

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The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

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

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

Installation instructions

Date