Specifications

Photo is representative

Eaton 199069

Eaton Moeller® series Rapid Link - DOL starter, 6.6 A, Sensor input 2, AS-Interface®, S-7.4 for 31 modules, HAN Q4/2, with manual override switch

General specifications

PRODUCT NAME	Eaton Rapid Link DOL starter
CATALOG NUMBER	199069
EAN	4015081971275
PRODUCT LENGTH/DEPTH	120 mm
PRODUCT HEIGHT	270 mm
PRODUCT WIDTH	220 mm
PRODUCT WEIGHT	1.8 kg
CERTIFICATIONS	CCC CE UL approval IEC/EN 60947-4-2 RoHS UL 60947-4-2 UL 60947-4-2
CATALOG NOTES	Assigned motor rating: for normal internally and externally ventilated 4 pole, three-phase asynchronous motors with 1500 rpm at 50 Hz or 1800 min at 60 Hz
MODEL CODE	RAMO5-D200A31-412RS1

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Features & Functions

FEATURES	Parameterization: Keypad Parameterization: drivesConnect mobile (App) Parameterization: drivesConnect Parameterization: Fieldbus Diagnostics and reset on device and via AS-Interface
FITTED WITH:	Manual override switch Key switch position AUTO Key switch position OFF/RESET Thermo-click Electronic motor protection Thermistor monitoring PTC Key switch position HAND Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation Short-circuit release
FUNCTIONS	External reset possible Temperature compensated overload protection

General

CLASS	CLASS 10 A
DEGREE OF PROTECTION	IP65 NEMA 12
ELECTROMAGNETIC COMPATIBILITY	Class A
LIFESPAN, ELECTRICAL	10,000,000 Operations (at AC-3)
LIFESPAN, MECHANICAL	10,000,000 Operations (at AC-3)
MODEL	Direct starter
OVERLOAD RELEASE CURRENT SETTING - MIN	0.3 A
OVERLOAD RELEASE CURRENT SETTING - MAX	6.6 A
OVERVOLTAGE CATEGORY	III
PRODUCT CATEGORY	Motor starter
PROTOCOL	AS-Interface profile cable: S-7.4 for 31 modules ASI
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4000 V
SYSTEM CONFIGURATION TYPE	AC voltage Phase-earthed AC supply systems are not permitted. Center-point earthed star network (TN-S network)
TYPE	DOL starter
VOLTAGE TYPE	DC

Ambient conditions, mechanical

MOUNTING POSITION	Vertical
SHOCK RESISTANCE	15 g, Mechanical, According to IEC/EN 60068-2-27, 11 ms, Half-sinusoidal shock 11 ms, 1000 shocks per shaft
VIBRATION	Resistance: 6 Hz, Amplitude 0.15 mm Resistance: 57 Hz, Amplitude transition frequency on acceleration Resistance: 10 - 150 Hz, Oscillation frequency Resistance: According to IEC/EN 60068-2-6

Climatic environmental conditions

ALTITUDE	Above 1000 m with 1 % performance reduction per 100 m Max. 1000 m Max. 2000 m
AMBIENT OPERATING TEMPERATURE - MIN	-10 °C
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
CLIMATIC PROOFING	< 95 %, no condensation In accordance with IEC/EN 50178

Main circuit

CURRENT LIMITATION	0.3 - 6.6 A, motor, main circuit Adjustable, motor, main circuit
INPUT CURRENT	6.6 A (at 150 % Overload)
MAINS SWITCH-ON FREQUENCY	Maximum of one time every 60 seconds
MAINS VOLTAGE TOLERANCE	380 - 480 V (-15 %/+10 %, at 50/60 Hz)
OFF-DELAY	20 - 35 ms
ON-DELAY	20 - 35 ms
OUTPUT FREQUENCY	50/60 Hz
OVERLOAD CYCLE	AC-53a
RATED FREQUENCY - MIN	47 Hz
RATED FREQUENCY - MAX	63 Hz
RATED OPERATIONAL CURRENT (IE)	6.6 A
RATED OPERATIONAL CURRENT (IE) AT 150% OVERLOAD	6.6 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	6.6 A
RATED OPERATIONAL POWER AT 380/400 V, 50 HZ - MIN	0.09 kW
RATED OPERATIONAL POWER AT 380/400 V, 50 HZ - MAX	3 kW
RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ	0 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	3 kW
RATED OPERATIONAL VOLTAGE	480 V AC, 3-phase 400 V AC, 3-phase
SUPPLY FREQUENCY	50/60 Hz, fLN, Main circuit
SYSTEM CONFIGURATION TYPE	AC voltage Phase-earthed AC supply systems are not permitted. Center-point earthed star network (TN-S network)

Motor rating

ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	3 HP

Short-circuit rating

RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	10 kA
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 380 V, 400 V, 415 V	0 A
SHORT-CIRCUIT PROTECTION (EXTERNAL OUTPUT CIRCUITS)	Type 1 coordination via the power bus' feeder unit, Main circuit

Control circuit

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	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	0 V
RATED CONTROL VOLTAGE (UC)	24 V DC (-15 %/+20 %, external via AS-Interface® plug)

Communication

CONNECTION	Connections pluggable in power section
INTERFACES	Specification: S-7.4 (AS-Interface®) Max. total power consumption from AS-Interface® power supply unit (30 V): 190 mA Number of slave addresses: 31 (AS-Interface®)

Contacts

NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0

Cable

CABLE LENGTH	10 m, Radio interference level, maximum motor cable length

Design verification

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	Meets the product

INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS	standard's requirements.
10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION	Meets the product standard's requirements.
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 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.

Resources

APPLICATION NOTES	eaton-rapid-link-generation-change-ramo4-to-ramo5-ap040198-en-us.pdf eaton-rapid-link-5-rasp5-profinet-communication-ap040215-en-us.pdf eaton-rapid-link-5-configuration-rockwell-plc-ap040195-en-us.pdf eaton-powerxl-dx-com-stick-3-ap040190-en-us.pdf Electromagnetic compatibility (EMC) eaton-rapid-link-generation-change-ra-mo-to-ramo4-ap040081-en-us.pdf eaton-rapid-link-generation-change-ra-sp-to-rasp5-ap040196-en-us.pdf eaton-rapid-link-firmware-update-rasp4-ap040219-en-us.pdf eaton-rapid-link-generation-change-rasp4-to-rasp5-ap040197-en-us.pdf eaton-rapid-link-generation-change-ra-sp-to-rasp4-ap040080-en-us.pdf eaton-powerxl-da1-dc1-de1-internal-motor-protection-ap040016-en-us.pdf eaton-powerxl-da1-dc1-db1-de1-rapidlink5-firmware-update-ap040214-en-us.pdf
BROCHURES	eaton-rapid-link-5-brochure-br040014en-en-us.pdf

	eaton-powerxl-variable-frequency-drives-material-handling-brochure-br040017en-en-us.pdf
CATALOGUES	eaton-rapid-link-5-drive-system-catalog-ca040002en-en-us Product Range Catalog Drives Engineering
DECLARATIONS OF CONFORMITY	DA-DC-00003964.pdf DA-DC-00004523.pdf DA-DC-00004184.pdf DA-DC-00004525.pdf
DRAWINGS	eaton-bus-adapter-rapidlink-reversing-starter-dimensions-002.eps eaton-bus-adapter-rapidlink-reversing-starter-dimensions-003.eps
ECAD MODEL	ETN.RAMO5-D200A31-412RS1.edz
INSTALLATION INSTRUCTIONS	IL034084ZU
INSTALLATION VIDEOS	Rapid Link 5
MCAD MODEL	ramo5_v5.dwg ramo5_v5.stp
SOFTWARE, FIRMWARE, AND APPLICATIONS	eaton-rapidlink5-firmware-release-note-mz034006en-us.pdf

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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