Specifications

Photo is representative

Eaton 199070

Eaton Moeller® series Rapid Link - DOL starter, 6.6 A, Sensor input 2, 180/207 V DC, 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	199070
EAN	4015081971282
PRODUCT LENGTH/DEPTH	120 mm
PRODUCT HEIGHT	270 mm
PRODUCT WIDTH	220 mm
PRODUCT WEIGHT	1.8 kg
CERTIFICATIONS	CCC UL approval CE 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-D201A31-412RS1

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Features & Functions

FEATURES	Parameterization: Keypad Parameterization: drivesConnect Parameterization: drivesConnect mobile (App) Parameterization: Fieldbus Diagnostics and reset on device and via AS-Interface
FITTED WITH:	Key switch position AUTO Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation Thermistor monitoring PTC Manual override switch Key switch position OFF/RESET Electronic motor protection Thermo-click Key switch position HAND Short-circuit release
FUNCTIONS	For actuation of motors with mechanical brake 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	Center-point earthed star network (TN-S network) AC voltage Phase-earthed AC supply systems are not permitted.
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: According to IEC/EN 60068-2-6 Resistance: 10 - 150 Hz, Oscillation frequency Resistance: 57 Hz, Amplitude transition frequency on acceleration

Climatic environmental conditions

ALTITUDE	Above 1000 m with 1 % performance reduction per 100 m Max. 2000 m Max. 1000 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	400 V AC, 3-phase 480 V AC, 3-phase
SUPPLY FREQUENCY	50/60 Hz, fLN, Main circuit
SYSTEM CONFIGURATION TYPE	Center-point earthed star network (TN-S network) AC voltage Phase-earthed AC supply systems are not permitted.

Motor rating

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

Braking function

BRAKING CURRENT	≤ 0.6 A (max. 6 A for 120 ms), Actuator for external motor brake
BRAKING VOLTAGE	180/215 V DC -15 % / +10 %, Actuator for external motor brake

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) 180/207 V DC (external brake 50/60 Hz)

Communication

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

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 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	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	Is the panel builder's responsibility.

Resources

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

INSULATING MATERIAL	
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.

	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-003.eps eaton-bus-adapter-rapidlink-reversing-starter-dimensions-002.eps
ECAD MODEL	ETN.RAMO5-D201A31-412RS1.edz
INSTALLATION INSTRUCTIONS	IL034084ZU
INSTALLATION VIDEOS	Rapid Link 5
MCAD MODEL	ramo5_v5.stp ramo5_v5.dwg
SOFTWARE, FIRMWARE, AND APPLICATIONS	eaton-rapidlink5-firmware-release-note-mz034006en-us.pdf

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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