

Specifications



Photo is representative



Eaton 199113

Eaton Moeller® series Rapid Link - Reversing starter, 6.6 A, Sensor input 2, Actuator output 1, AS-Interface®, S-7.A.E. for 62 modules, HAN Q4/2, with manual override switch

General specifications

PRODUCT NAME	Eaton Rapid Link Reversing starter
CATALOG NUMBER	199113
EAN	4015081971718
PRODUCT LENGTH/DEPTH	120 mm
PRODUCT HEIGHT	270 mm
PRODUCT WIDTH	220 mm
PRODUCT WEIGHT	1.81 kg
CERTIFICATIONS	UL 60947-4-2 UL approval CE IEC/EN 60947-4-2 RoHS CCC 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-W210A32-412RS1

Features & Functions

FEATURES

Parameterization: Fieldbus

Parameterization:
drivesConnect
Parameterization: Keypad
Diagnostics and reset on
device and via AS-Interface

Parameterization:
drivesConnect mobile
(App)

FITTED WITH:

1 Actuator output
Key switch position AUTO
Key switch position HAND
Key switch position
OFF/RESET
Two sensor inputs through
M12 sockets (max. 150
mA) for quick stop and
interlocked manual
operation
Thermistor monitoring
PTC
Thermo-click
Manual override switch
Electronic motor
protection
Short-circuit release

FUNCTIONS

External reset possible
Temperature
compensated overload
protection

General

CLASS CLASS 10 A

DEGREE OF PROTECTION NEMA 12
IP65

**ELECTROMAGNETIC
COMPATIBILITY** Class A

LIFESPAN, ELECTRICAL 10,000,000 Operations (at
AC-3)

LIFESPAN, MECHANICAL 10,000,000 Operations (at
AC-3)

MODEL Reversing 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 62 modules
ASI

**RATED IMPULSE
WITHSTAND VOLTAGE
(UIMP)** 4000 V

**SYSTEM
CONFIGURATION TYPE** Center-point earthed star
network (TN-S network)
Phase-earthed AC supply
systems are not
permitted.
AC voltage

TYPE Reversing 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: 57 Hz, Amplitude transition frequency on acceleration Resistance: 10 - 150 Hz, Oscillation frequency

Climatic environmental conditions

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

Motor rating

ASSIGNED MOTOR

POWER AT 460/480 V, 60 3 HP

HZ, 3-PHASE

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

Communication

CONNECTION Connections pluggable in
power section

INTERFACES Specification: S-7.A.E. (AS-
Interface®)
Number of slave
addresses: 62 (AS-
Interface®)
Max. total power
consumption from AS-
Interface® power supply
unit (30 V): 190 mA

Cable

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

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)

Contacts

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

**NUMBER OF AUXILIARY
CONTACTS (NORMALLY
OPEN CONTACTS)** 1

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

[eaton-powerxl-dx-com-stick-3-ap040190-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](#)

[eaton-rapid-link-5-configuration-rockwell-plc-ap040195-en-us.pdf](#)

[Electromagnetic compatibility \(EMC\)](#)

[eaton-rapid-link-generation-change-ra-sp-to-rasp4-ap040080-en-us.pdf](#)

APPLICATION NOTES

[eaton-rapid-link-generation-change-rasp4-to-rasp5-ap040197-en-us.pdf](#)

[eaton-rapid-link-generation-change-ra-sp-to-rasp5-ap040196-en-us.pdf](#)

[eaton-rapid-link-generation-change-ra-mo-to-ramo4-ap040081-en-us.pdf](#)

[eaton-rapid-link-firmware-update-rasp4-ap040219-en-us.pdf](#)

[eaton-powerxl-da1-dc1-db1-de1-rapidlink5-firmware-update-ap040214-en-us.pdf](#)

[eaton-powerxl-da1-dc1-de1-internal-motor-protection-ap040016-en-us.pdf](#)

BROCHURES

[eaton-powerxl-variable-frequency-drives-material-handling-brochure-br040017en-en-us.pdf](#)

	eaton-rapid-link-5-brochure-br040014en-en-us.pdf
CATALOGUES	Product Range Catalog Drives Engineering eaton-rapid-link-5-drive-system-catalog-ca040002en-en-us
DECLARATIONS OF CONFORMITY	DA-DC-00004523.pdf DA-DC-00003964.pdf DA-DC-00004525.pdf DA-DC-00004184.pdf
DRAWINGS	eaton-bus-adapter-rapidlink-reversing-starter-dimensions-003.eps eaton-bus-adapter-rapidlink-reversing-starter-dimensions-002.eps
ECAD MODEL	ETN.RAMO5-W210A32-412RS1.edz
INSTALLATION INSTRUCTIONS	IL034084ZU
INSTALLATION VIDEOS	Rapid Link 5
MCAD MODEL	ramo5_v12.stp ramo5_v12.dwg
SOFTWARE, FIRMWARE, AND APPLICATIONS	eaton-rapidlink5-firmware-release-note-mz034006en-us.pdf

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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