DATASHEET - RAMO5-W211A31-4120S1

Reversing starter, 6.6 A, Sensor input 2, Actuator output 1, 180/207 V DC, AS-Interface®, S-7.4 for 31 modules, HAN Q4/2

Powering Business Worldwide™

Part no. RAMO5-W211A31-4120S1
199085

Product name	Eaton Moeller® series Rapid Link Reversing starter
Part no.	RAMO5-W211A31-4120S1
EAN	4015081971435
Product Length/Depth	120 millimetre
Product height	270 millimetre
Product width	220 millimetre
Product weight	1.64 kilogram
Certifications	RoHS UL 60947-4-2 UL approval IEC/EN 60947-4-2 CE CCC
Product Tradename	Rapid Link
Product Type	Reversing starter
Product Sub Type	None
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
Features	Parameterization: drivesConnect mobile (App) Parameterization: drivesConnect Diagnostics and reset on device and via AS-Interface Parameterization: Fieldbus Parameterization: Keypad
Fitted with:	1 Actuator output Thermo-click Key switch position HAND Electronic motor protection Thermistor monitoring PTC Key switch position AUTO Key switch position OFF/RESET Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation Short-circuit release
Functions	For actuation of motors with mechanical brake External reset possible Temperature compensated overload protection
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 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	Reversing starter
Voltage type	DC

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: According to IEC/EN 60068-2-6 Resistance: 10 - 150 Hz, Oscillation frequency
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	In accordance with IEC/EN 50178 < 95 %, no condensation
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 - max	63 Hz
Rated frequency - min	47 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 - max	3 kW
Rated operational power at 380/400 V, 50 Hz - min	0.09 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
Assigned motor power at 460/480 V, 60 Hz, 3-phase	3 HP
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
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
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)	180/207 V DC (external brake 50/60 Hz) 24 V DC (-15 %/+20 %, external via AS-Interface® plug)

Connection			Connections pluggable in power section
Interfaces			Max. total power consumption from AS-Interface® power supply unit (30 V): 190 mA Specification: S-7.4 (AS-Interface®) Number of slave addresses: 31 (AS-Interface®)
Number of auxiliary contacts (normally closed contacts)			0
Number of auxiliary contacts (normally open contacts)			1
Cable length			10 m, Radio interference level, maximum motor cable length
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 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.

Technical data ETIM 8.0

Low-voltage industrial components (EG000017) / Motor starter/Motor starter combination (EC001037)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Load breakout, motor breakout / Motor starter combination (ecl@ss10.0.1-27-37-09-05 [AJZ718013])

Type of motor starter			Reversing starter
With short-circuit release			Yes
Rated control supply voltage Us at AC 50HZ		V	0 - 0
Rated control supply voltage Us at AC 60HZ		V	0 - 0
Rated control supply voltage Us at DC		V	0 - 0
Voltage type for actuating			DC
Rated operation power at AC-3, 230 V, 3-phase		kW	0
Rated operation power at AC-3, 400 V		kW	3
Rated power, 460 V, 60 Hz, 3-phase		kW	2.238
Rated power, 575 V, 60 Hz, 3-phase		kW	0
Rated operation current Ie		A	6.6
Rated operation current at AC-3, 400 V		A	6.6
Overload release current setting		A	0.3 - 6.6
Rated conditional short-circuit current, type 1, 480 Y/277 V		A	65,000
Rated conditional short-circuit current, type 1, 600 Y/347 V		A	0
Rated conditional short-circuit current, type 2, 230 V		A	0
Rated conditional short-circuit current, type 2, 400 V		A	0

Number of auxiliary contacts as normally open contact			1
Number of auxiliary contacts as normally closed contact			0
Ambient temperature, upper operating limit		°C	55
Temperature compensated overload protection			Yes
Release class			CLASS 10 A
Type of electrical connection of main circuit			Plug-in connection
Type of electrical connection for auxiliary- and control current circuit			Plug-in connection
Rail mounting possible			No
With transformer			No
Number of command positions			2
Suitable for emergency stop			No
Coordination class according to IEC 60947-4-3			Class 1
Number of indicator lights			0
External reset possible			Yes
With fuse			No
Degree of protection (IP)			IP65
Degree of protection (NEMA)			12
Supporting protocol for TCP/IP			No
Supporting protocol for PROFIBUS			No
Supporting protocol for CAN			No
Supporting protocol for INTERBUS			No
Supporting protocol for ASI			Yes
Supporting protocol for Modbus			No
Supporting protocol for Data-Highway			No
Supporting protocol for DeviceNet			No
Supporting protocol for SUCONET			No
Supporting protocol for LON			No
Supporting protocol for PROFINET IO			No
Supporting protocol for PROFINET CBA			No
Supporting protocol for SERCOS			No
Supporting protocol for Foundation Fieldbus			No
Supporting protocol for EtherNet/IP			No
Supporting protocol for AS-Interface Safety at Work			No
Supporting protocol for DeviceNet Safety			No
Supporting protocol for INTERBUS-Safety			No
Supporting protocol for PROFIsafe			No
Supporting protocol for SafetyBUS p			No
Supporting protocol for other bus systems			No
Width		mm	220
Height		mm	270
Depth		mm	120