DATASHEET - RAMO5-D202A31-412RS1

DOL starter, 6.6 A, Sensor input 2, 230/277 V AC, AS-Interface®, S-7.4 for 31 modules, HAN Q4/2, with manual override switch

Part no.   **RAMO5-D202A31-412RS1**
199071

Product name		Eaton Moeller® series Rapid Link DOL starter
Part no.		RAMO5-D202A31-412RS1
EAN		4015081971299
Product Length/Depth		120 millimetre
Product height		270 millimetre
Product width		220 millimetre
Product weight		1.8 kilogram
Certifications		UL 60947-4-2 CE CCC RoHS IEC/EN 60947-4-2 UL approval
Product Tradename		Rapid Link
Product Type		DOL 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: Keypad Diagnostics and reset on device and via AS-Interface Parameterization: drivesConnect Parameterization: Fieldbus Parameterization: drivesConnect mobile (App)
Fitted with:		Thermistor monitoring PTC Key switch position AUTO Electronic motor protection Key switch position HAND Thermo-click Key switch position OFF/RESET Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation Manual override switch 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		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		Phase-earthed AC supply systems are not permitted. Center-point earthed star network (TN-S network) AC voltage
Type		DOL 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: 10 - 150 Hz, Oscillation frequency Resistance: According to IEC/EN 60068-2-6 Resistance: 57 Hz, Amplitude transition frequency on acceleration
Altitude		Max. 1000 m Above 1000 m with 1 % performance reduction per 100 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		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		230/277 V AC -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)		24 V DC (-15 %/+20 %, external via AS-Interface® plug) 230/277 V AC (external brake 50/60 Hz)

Connection		Connections pluggable in power section
Interfaces		Max. total power consumption from AS-Interface® power supply unit (30 V): 190 mA Number of slave addresses: 31 (AS-Interface®) Specification: S-7.4 (AS-Interface®)
Number of auxiliary contacts (normally closed contacts)		0
Number of auxiliary contacts (normally open contacts)		0
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		Direct online starter (DOL)
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	10,000
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		0
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		1
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