Speed controllers, 2.4 A, 0.75 kW, Sensor input 4, 400/480 V AC, AS-Interface (8), S-7.4 for 31 modules, HAN Q4/2, with braking resistance



Part no. RASP5-2404A31-4120100S1 198735

Product name	Eaton Moeller® series Rapid Link Speed controller
Part no.	RASP5-2404A31-4120100S1
EAN	4015081967933
Product Length/Depth	157 millimetre
Product height	270 millimetre
Product width	220 millimetre
Product weight	3.42 kilogram
Certifications	UL approval UL 61800-5-1 RoHS CE IEC/EN 61800-5-1
Product Tradename	Rapid Link
Product Type	Speed controller
Product Sub Type	None
Catalog Notes	can be switched over from U/f to (vector) speed control Connection of supply voltage via adapter cable on round or flexible busbar junctio Diagnostics and reset on device and via AS-Interface Four fixed speeds integrated PTC thermistor monitoring and Thermoclick with safe isolation optional: 4 sensor inputs with M12-Y adapter for switchover to creep speed optional: Faster stop if external 24 V fails Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation with AUTO - OFF/RESET - HAND key switches with selector switch REV - OFF - FWD
Features	Diagnostics and reset on device and via AS-Interface Parameterization: drivesConnect Parameterization: Keypad Parameterization: drivesConnect mobile (App) Parameterization: Fieldbus
Fitted with:	Control unit Breaking resistance Key switch position HAND Thermo-click with safe isolation Selector switch (Positions: REV - OFF - FWD) PC connection IGBT inverter Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation Four fixed speeds Internal DC link Braking resistance PTC thermistor monitoring Key switch position AUTO Key switch position OFF/RESET
Functions	For actuation of motors with mechanical brake 4-quadrant operation possible Brake chopper with braking resistance for dynamic braking
Degree of protection	NEMA 12 IP65
Electromagnetic compatibility	1st and 2nd environments (according to EN 61800-3)
Overvoltage category	III
Product category	Speed controller
Protocol	AS-Interface profile cable: S-7.4 for 31 modules ASI
Radio interference class	C1: for conducted emissions only C2, C3: depending on the motor cable length, the connected load, and ambient conditions. External radio interference suppression filters (optional) may be necessary.
Rated impulse withstand voltage (Uimp)	2000 V

System configuration type	AC voltage Phase-earthed AC supply systems are not permitted. Center-point earthed star network (TN-S network)
Mounting position	Vertical
Shock resistance	15 g, Mechanical, According to IEC/EN 60068-2-27, 11 ms, Half-sinusoidal sho ms, 1000 shocks per shaft
Vibration	Resistance: According to IEC/EN 60068-2-6 Resistance: 10 - 150 Hz, Oscillation frequency Resistance: 57 Hz, Amplitude transition frequency on acceleration Resistance: 6 Hz, Amplitude 0.15 mm
Altitude	Max. 2000 m Above 1000 m with 1 % performance reduction per 100 m
Ambient operating temperature - min	-10 °C
Ambient operating temperature - max	40 °C
Ambient storage temperature - min	-40 °C
Ambient storage temperature - max	70 °C
Climatic proofing	< 95 %, no condensation In accordance with IEC/EN 50178
Current limitation	Adjustable, motor, main circuit 0.2 - 2.4 A, motor, main circuit
Delay time	< 10 ms, On-delay < 10 ms, Off-delay
Efficiency	97 % (η)
Heat dissipation at current/speed	27.5 W at 50% current and 90% speed 31.8 W at 100% current and 90% speed 33.5 W at 25% current and 50% speed 34.6 W at 50% current and 50% speed 35.1 W at 25% current and 0% speed 36.6 W at 100% current and 50% speed 36.8 W at 50% current and 0% speed 40.7 W at 100% current and 0% speed
Input current ILN at 150% overload	2.5 A
Leakage current at ground IPE - max	3.5 mA
Mains current distortion	120 %
Mains switch-on frequency	Maximum of one time every 60 seconds
Mains voltage - max	480 V
Mains voltage - min	380 V
Mains voltage tolerance Operating mode	380 - 480 V (-10 %/+10 %, at 50/60 Hz) U/f control Sensorless vector control (SLV) Synchronous reluctance motors BLDC motors PM and LSPM motors
Output frequency - max	500 Hz
Output frequency - min	0 Hz
Overload current	At 40 °C For 60 s every 600 s
Overload current IL at 150% overload	3.6 A
Rated frequency - max	66 Hz
Rated frequency - min	45 Hz
Rated operational current (le)	2.4 A at 150% overload (at an operating frequency of 8 kHz and an ambient air temperature of +40 °C)
Rated operational power at 380/400 V, 50 Hz, 3-phase	0.75 kW
Rated operational voltage	400 V AC, 3-phase 480 V AC, 3-phase
Resolution	0.1 Hz (Frequency resolution, setpoint value)
Starting current - max	200 %, IH, max. starting current (High Overload), For 2 seconds every 20 s
Supply frequency	50/60 Hz
Switching frequency	8 kHz, 4 - 32 kHz adjustable, fPWM, Power section, Main circuit
Assigned motor power at 460/480 V, 60 Hz, 3-phase	1 HP

Manual	Braking current	≤ 0.6 A (max. 6 A for 120 ms), Actuator for external motor brake
Switch-on-threshold for the braking transistor Rated conditional abort-direct current (tq) Short-circuit protection (external coupt circuits) Rated common voltage (Uc) AS-Interface Communication interface Communication interface Communication interface Common Plug type: RAN Q42 Interfaces Max. total power consumption from AS-Interface® plug) Interfaces As-Interface Common Plug type: RAN Q42 Interfaces Max. total power consumption from AS-Interface® power supply unit Q0 V1. 15 m/s 20 Sept. (action to S-74 A/S-Interface®) Specification S-74 A/S-Interface® power supply unit Q0 V1. 15 m/s 20 Sept. (action to S-74 A/S-Interface®) Cable length Cable leng	Braking torque	
Rated conditional short-circuit current (lo) Short-circuit protection (external output circuits) Paye 1 coordination via the power bus "feeder unit, Main circuit A004480 V.A.C. (external brake 50/889 Hz) 24 V.D.C. (-15 %4/280 %, external via AS-interface-89 plug) Communication interface AS-interface Pug Sper; HAN DAC2 Max. total power consumption from AS-interface-89 puncy unit DD VI. 18 Max. total power consumption from AS-interface-89 puncy unit DD VI. 18 Cable length C2 5 m, maximum motor cable length C3 5 m, maximum motor cable length C3 5 m, maximum motor cable length C3 5 m, maximum motor cable length C1 5 m, maximum motor	Braking voltage	400/480 V AC -15 $\%$ / +10 $\%$, Actuator for external motor brake
Short-circuit protection (external output circuits) Rated control voltage (Uc) AS-Interface Communication interface Plug types: HAND QV2 Interfacess Mass. Out all power consumption from AS-Interface® power supply unit (30 V): 1st and a supply of the communication interface of the communication of the communication interface of the communication of the co	Switch-on threshold for the braking transistor	765 V DC
Raited control voltage (Uc) Communication interface Connection AS- interface AS- interface Ping type: HAN BQ2 Interfaces Mas. total power consumption from AS-Interface® power supply unit (DSI V): 15 Max Day Mas. total power consumption from AS-Interface® power supply unit (DSI V): 15 Max Day Max. total power consumption from AS-Interface® power supply unit (DSI V): 15 Max Day Max. total power consumption from AS-Interface® power supply unit (DSI V): 15 Max Day Max. total power consumption from AS-Interface® power supply unit (DSI V): 15 Max Day Each length Calle length	Rated conditional short-circuit current (Iq)	10 kA
Communication interface Connection AS-Interface Connection AS-Interface Connection AS-Interface Connection AS-Interface AS	Short-circuit protection (external output circuits)	Type 1 coordination via the power bus' feeder unit, Main circuit
Emeraces Plug type: HAN Q4/2 Interfaces Max total power consumption from AS-Interface® power supply unit (30 V); 15 mA Number of slave addresses: 31 (AS-Interface®) Specifications S-7.4 (AS-Interface®) Specifications S-7.4 (AS-Interface®) Specifications S-7.4 (AS-Interface®) Specifications S-7.4 (AS-Interface®) Specification of thermal stability of enclosures	Rated control voltage (Uc)	
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observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction	10.11 Short-circuit rating	Is the panel builder's responsibility. The specifications for the switchgear must observed.
	10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must 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) / Frequency converter =< 1 kV (EC001857)					
Electric engineering, automation, process control engineering / Electrical drive / Static frequency converter / Static frequency converter = < 1 kV (ecl@ss10.0.1-27-02-31-01 [AKE177014])					
Mains voltage	V	380 - 480			
Mains frequency		50/60 Hz			
Number of phases input		3			
Number of phases output		3			
Max. output frequency	Hz	500			
Max. output voltage	V	500			
Nominal output current I2N	Α	2.4			
Max. output at quadratic load at rated output voltage	kW	0.75			

Max. output at linear load at rated output voltage	kW	0.75
Relative symmetric net frequency tolerance	%	10
Relative symmetric net voltage tolerance	%	10
Number of analogue outputs	,•	0
Number of analogue inputs		0
Number of digital outputs		0
Number of digital inputs		4
With control element		Yes
Application in industrial area permitted		Yes
Application in domestic- and commercial area permitted		Yes
Supporting protocol for TCP/IP		No
Supporting protocol for PROFIBUS		No No
Supporting protocol for CAN		No
Supporting protocol for INTERBUS		No
Supporting protocol for ASI		Yes
Supporting protocol for KNX		No
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 BACnet		No
Supporting protocol for other bus systems		No
Number of HW-interfaces industrial Ethernet		0
Number of interfaces PROFINET		0
Number of HW-interfaces RS-232		0
Number of HW-interfaces RS-422		0
Number of HW-interfaces RS-485		1
Number of HW-interfaces serial TTY		0
Number of HW-interfaces USB		0
Number of HW-interfaces parallel		0
Number of HW-interfaces other		1
With optical interface		No
With PC connection		Yes
Integrated breaking resistance		Yes
4-quadrant operation possible		Yes
Type of converter		U converter
Degree of protection (IP)		IP65
Degree of protection (NEMA)		12
Height	mm	270
Width	mm	220
Depth	mm	157