Speed controller, 5.6 A, 2.2 kW, Sensor input 4, AS-Interface \$, S-7.4 for 31 modules, HAN Q5, with braking resistance



Part no. RASP5-5400A31-5120100S1 198569

Product name	Eaton Moeller® series Rapid Link Speed controller
Part no.	RASP5-5400A31-5120100S1
EAN	4015081964444
Product Length/Depth	157 millimetre
Product height	270 millimetre
Product width	220 millimetre
Product weight	3.42 kilogram
Certifications	IEC/EN 61800-5-1 UL 61800-5-1 UL approval CE RoHS
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 jur 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
eatures	Diagnostics and reset on device and via AS-Interface Parameterization: drivesConnect Parameterization: drivesConnect mobile (App) Parameterization: Fieldbus Parameterization: Keypad
Fitted with:	Braking resistance Internal DC link Key switch position OFF/RESET Selector switch (Positions: REV - OFF - FWD) PC connection Breaking resistance Key switch position HAND IGBT inverter PTC thermistor monitoring Control unit Key switch position AUTO Thermo-click with safe isolation Four fixed speeds Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation
unctions	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
· ,	AS-Interface profile cable: S-7.4 for 31 modules
Protocol	ASI
Protocol Radio interference class	C2, C3: depending on the motor cable length, the connected load, and ambien conditions. External radio interference suppression filters (optional) may be necessary. C1: for conducted emissions only

	Phase-earthed AC supply systems are not permitted. AC voltage
Mounting position	Vertical
Shock resistance	15 g, Mechanical, According to IEC/EN 60068-2-27, 11 ms, Half-sinusoidal shock 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 0.5 - 5.6 A, motor, main circuit
Delay time	< 10 ms, On-delay < 10 ms, Off-delay
Efficiency	98 % (η)
Heat dissipation at current/speed	36.6 W at 25% current and 0% speed 38.1 W at 25% current and 50% speed 42 W at 50% current and 0% speed 42.5 W at 50% current and 90% speed 44.2 W at 50% current and 50% speed 55.9 W at 100% current and 0% speed 58.3 W at 100% current and 90% speed 60.4 W at 100% current and 50% speed
Input current ILN at 150% overload	5.3 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) Synchronous reluctance motors U/f control BLDC motors PM and LSPM motors Sensorless vector control (SLV)
Output frequency - max	500 Hz
Output frequency - min Overload current	0 Hz For 60 s every 600 s At 40 °C
Overload current IL at 150% overload	8.4 A
Rated frequency - max	66 Hz
Rated frequency - min	45 Hz
Rated operational current (le)	5.6 A at 150% overload (at an operating frequency of 8 kHz and an ambient air temperature of +40 $^{\circ}\text{C})$
Rated operational power at 380/400 V, 50 Hz, 3-phase	2.2 kW
Rated operational voltage	480 V AC, 3-phase 400 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 seconds Power section
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	3 HP

Braken's torque Switch-on threshold for the braking transistor Switch-on threshold for the braking transistor Rated conditional short-circuit current (Iq) Rated conditional short-circuit protection (external output circuits) Rated control voltage (Uc) Rated control voltage (Uc) Communication interface Connection Communication interface Connection Interfaces Cash-interface Connection Cash-interface Connection Cash-interface Connection Cash-interface Cash-i	Braking current	≤ 0.6 A (max. 6 A for 120 ms), Actuator for external motor brake
Switch on threshold for the braking transister Rated conditional abort-circuit protection (external output circuits) Rated control voltage (Uc) Rated control voltage (Uc) Rated control voltage (Uc) Communication interface Connection Connection Interfaces Rated control voltage (Uc) Communication interface Connection Interfaces Rated control voltage (Uc) Cashel length Cashel lengt		
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Specification: S-74 (AS-Interface®) Specification:	Interfaces	
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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	10.9.3 Impulse withstand voltage	Is the panel builder's responsibility.
provide heat dissipation data for the devices. 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function 10.14 Short-circuit rating 10.15 Short-circuit rating 10.15 Short-circuit rating 10.16 Short-circuit rating 10.17 Short-circuit rating 10.18 Short-circuit rating 10.19 Short-circuit rating 10.19 Short-circuit rating 10.10 Short-circuit rating 10.10 Short-circuit rating 10.11 Short-circuit rating 10.12 Flectromagnetic compatibility. The specifications for the switchgear must be observed. 10.19 Short-circuit rating 10.11 Short-circuit rating 10.12 Flectromagnetic compatibility. The specifications for the switchgear must be observed. 10.12 Flectromagnetic compatibility. The specifications for the switchgear must be observed.	10.9.4 Testing of enclosures made of insulating material	Is the panel builder's responsibility.
observed. 10.12 Electromagnetic compatibility 10.13 Mechanical function observed. Is the panel builder's responsibility. The specifications for the switchgear must be observed. The device meets the requirements, provided the information in the instruction	10.10 Temperature rise	
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 be observed.
	10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
	10.13 Mechanical function	· · · · · · · · · · · · · · · · · · ·

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 ٧ 380 - 480 Mains frequency 50/60 Hz 3 Number of phases input Number of phases output 3 500 Max. output frequency Hz Max. output voltage ٧ 500 Nominal output current I2N Α 5.6 Max. output at quadratic load at rated output voltage kW 2.2 kW Max. output at linear load at rated output voltage 2.2 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
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 USB Number of HW-interfaces parallel		
		0
Number of HW-interfaces other With entired interface		1 No
With optical interface		No Voc
With PC connection		Yes
Integrated breaking resistance		Yes
4-quadrant operation possible		Yes
Type of converter Page of protection (IR)		U converter
Degree of protection (IP)		IP65
Degree of protection (NEMA)		12
Height	mm	270
Width	mm	220
Depth	mm	157