Speed controllers, 5.6 A, 2.2 kW, Sensor input 4, AS-Interface®, S-7.4 for 31 modules, HAN Q4/2, with braking resistance



Part no. RASP5-5400A31-4120100S1 198804

Product name	Eaton Moeller® series Rapid Link Speed controller
Part no.	RASP5-5400A31-4120100S1
EAN	4015081968626
Product Length/Depth	157 millimetre
Product height	270 millimetre
Product width	220 millimetre
Product weight	3.42 kilogram
Certifications	UL 61800-5-1 UL approval 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 jun 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 mobile (App) Parameterization: Keypad Parameterization: drivesConnect Parameterization: Fieldbus
Fitted with:	PC connection Selector switch (Positions: REV - OFF - FWD) Breaking resistance Control unit Key switch position AUTO PTC thermistor monitoring Thermo-click with safe isolation Key switch position OFF/RESET Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation IGBT inverter Key switch position HAND Braking resistance Four fixed speeds Internal DC link
Functions	4-quadrant operation possible Brake chopper with braking resistance for dynamic braking
Degree of protection	IP65 NEMA 12
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
	Phase-earthed AC supply systems are not permitted.

	Center-point earthed star network (TN-S network) 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: 57 Hz, Amplitude transition frequency on acceleration Resistance: 6 Hz, Amplitude 0.15 mm Resistance: 10 - 150 Hz, Oscillation frequency
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	0.5 - 5.6 A, motor, main circuit Adjustable, motor, main circuit
Delay time Efficiency	< 10 ms, Off-delay < 10 ms, On-delay 98 % (ŋ)
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 50% speed 58.3 W at 100% current and 50% 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	380 - 480 V (-10 %/+10 %, at 50/60 Hz)
Operating mode	BLDC motors U/f control Sensorless vector control (SLV) PM and LSPM motors Synchronous reluctance 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	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 Communication interface Connection Connection Carlos Specification of the specification should be a specification of the specification should be a specification of the spe	Braking current	≤ 0.6 A (max. 6 A for 120 ms), Actuator for external motor brake
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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 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	0
Number of analogue outputs 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		
Supporting protocol for Modbus		No No
Supporting protocol for Data-Highway Supporting protocol for DeviceNet		No No
Supporting protocol for SUCONET		No No
Supporting protocol for LON Supporting protocol for PROFINET IO		No No
Supporting protocol for PROFINET CBA		No No
Supporting protocol for SERCOS Supporting protocol for Sepandation Fieldhus		No No
Supporting protocol for Foundation Fieldbus		No No
Supporting protocol for EtherNet/IP		No No
Supporting protocol for AS-Interface Safety at Work		No No
Supporting protocol for DeviceNet Safety		No No
Supporting protocol for INTERBUS-Safety		No No
Supporting protocol for PROFIsafe		No No
Supporting protocol for SafetyBUS p		No No
Supporting protocol for BACnet		No 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 No.
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