Speed controllers, 8.5 A, 4 kW, Sensor input 4, 180/207 V DC, AS-Interface®, S-7.4 for 31 modules, HAN Q4/2, with manual override switch, STO (Safe Torque Off), with fan



Part no. RASP5-8401A31-412R011S1 198861

Product name	Eaton Moeller® series Rapid Link Speed controller
Part no.	RASP5-8401A31-412R011S1
EAN	4015081969197
Product Length/Depth	195 millimetre
Product height	270 millimetre
Product width	220 millimetre
Product weight	3.78 kilogram
Certifications	RoHS UL approval CE IEC/EN 61800-5-1 UL 61800-5-1
Product Tradename	Rapid Link
Product Type	Speed controller
Product Sub Type	None
Catalog Notes	3 fixed speeds and 1 potentiometer speed can be switched over from U/f to (vector) speed control Connection of supply voltage via adapter cable on round or flexible busbar junct Diagnostics and reset on device and via AS-Interface 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	Parameterization: Fieldbus Parameterization: drivesConnect mobile (App) Parameterization: Keypad Internal and on heat sink, temperature-controlled Fan Diagnostics and reset on device and via AS-Interface Parameterization: drivesConnect
Fitted with:	PC connection Key switch position OFF/RESET Internal DC link Manual override switch Selector switch (Positions: REV - OFF - FWD) Control unit Fan IGBT inverter Key switch position AUTO Key switch position HAND Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation PTC thermistor monitoring Thermo-click with safe isolation
Functions	STO (Safe Torque Off) 1 potentiometer speed 3 fixed speeds For actuation of motors with mechanical brake
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.

System configuration type	Center-point earthed star network (TN-S network)
	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: 6 Hz, Amplitude 0.15 mm Resistance: 10 - 150 Hz, Oscillation frequency Resistance: 57 Hz, Amplitude transition frequency on acceleration
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	In accordance with IEC/EN 50178 < 95 %, no condensation
Current limitation	Adjustable, motor, main circuit 0.8 - 8.5 A, motor, main circuit
Delay time	< 10 ms, On-delay < 10 ms, Off-delay
Efficiency	98 % (η)
Heat dissipation at current/speed	51.6 W at 25% current and 0% speed 53.8 W at 25% current and 50% speed 60.9 W at 50% current and 0% speed 64 W at 50% current and 90% speed 65.4 W at 50% current and 50% speed 85.1 W at 100% current and 0% speed 94 W at 100% current and 50% speed 95.3 W at 100% current and 50% speed
Input current ILN at 150% overload	7.8 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	U/f control Sensorless vector control (SLV) PM and LSPM motors Synchronous reluctance motors BLDC 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	12.7 A
Rated frequency - max	66 Hz
Rated frequency - min	45 Hz
Rated operational current (Ie)	8.5 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	4 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 second Power section
Supply frequency	50/60 Hz
Switching frequency	8 kHz, 4 - 32 kHz adjustable, fPWM, Power section, Main circuit
	5 HP

Braking turque Sinder jurger Braking voltage Retad conditional short-circuit current leg Short-circuit protection (external output circuits) Retad control voltage (Ucl 10 LA Retad control voltage (Ucl 10 220 Y D C 15 % / 210 %, Actuator for external motor brake 10 220 Y D C 15 % / 210 %, Actuator for external motor brake 10 220 Y D C 15 % / 220 %, external via AS-Interface® plugl Communication interface Commection Pug type: HAN QA2 Max. total power communication from AS-Interface® power supply unit (39 V): Interfaces Max. total power communication from AS-Interface® power supply unit (39 V): Interfaces Cable length Ca S m, maximum motor cable leng	Braking current	≤ 0.6 A (max. 6 A for 120 ms), Actuator for external motor brake
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	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	8.5			
Max. output at quadratic load at rated output voltage	kW	4			

Max. output at linear load at rated output voltage	kW	4
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
		No
Supporting protocol for AS-Interface Safety at Work		
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
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		No
4-quadrant operation possible		No
Type of converter		U converter
Degree of protection (IP)		IP65
Degree of protection (NEMA)		12
Height	mm	270
Width	mm	220
Depth	mm	195