



□□□□□

Eaton 198726

Eaton Moeller® series Rapid Link - Speed controllers, 2.4 A, 0.75 kW, Sensor input 4, 180/207 V DC, AS-Interface®, S-7.4 for 31 modules, HAN Q5, with manual override switch

□□□□

PRODUCT NAME	Eaton Rapid Link Speed controller
CATALOG NUMBER	198726
PRODUCT LENGTH/DEPTH	157 mm
PRODUCT HEIGHT	270 mm
PRODUCT WIDTH	220 mm
PRODUCT WEIGHT	3.58 kg
CERTIFICATIONS	IEC/EN 61800-5-1 RoHS UL 61800-5-1 UL approval CE
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 junction • 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



Powering Business Worldwide

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: Keypad
 Parameterization:
 drivesConnect mobile
 (App)
 Parameterization: Fieldbus

Diagnostics and reset on
 device and via AS-Interface

Parameterization:
 drivesConnect

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.

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

Does not apply, since the

DECLARATIONS OF
CONFORMITY

[eaton-speed-controller-
declaration-of-conformity-
uk251107en.pdf](#)

ECAD MODEL

[ETN.RASP5-2401A31-
512R000S1.edz](#)

MCAD MODEL

[ramo5_v20.dwg](#)

□□□□□

[eaton-powerxl-speed-
control-unit-as-interface-
rasp5-il034085zu.pdf](#)

□□□□

[eaton-rapid-link-5-
brochure-br040014en-en-
us.pdf](#)

□□□□

[eaton-rapid-link-5-
mn034004en-us.pdf](#)

[eaton-bus-adapter-
rapidlink-speed-controller-
dimensions-004.eps](#)

[eaton-bus-adapter-
rapidlink-speed-controller-
dimensions-003.eps](#)

□□

[eaton-bus-adapter-
rapidlink-speed-controller-
dimensions-002.eps](#)

[eaton-bus-adapter-
rapidlink-speed-controller-
dimensions-005.eps](#)

IMPACT	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.
FITTED WITH:	Control unit Key switch position HAND Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation PC connection IGBT inverter Selector switch (Positions: REV - OFF - FWD) Thermo-click with safe isolation Key switch position OFF/RESET Key switch position AUTO Internal DC link Manual override switch PTC thermistor monitoring
CLIMATIC PROOFING	In accordance with IEC/EN 50178 < 95 %, no condensation
OPERATING MODE	Sensorless vector control (SLV) U/f control BLDC motors

	PM and LSPM motors Synchronous reluctance motors
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	2000 V
ALTITUDE	Max. 2000 m Above 1000 m with 1 % performance reduction per 100 m
APPLICATION IN DOMESTIC AND COMMERCIAL AREA PERMITTED	Yes
MAINS SWITCH-ON FREQUENCY	Maximum of one time every 60 seconds
AMBIENT OPERATING TEMPERATURE - MAX	40 °C
AMBIENT OPERATING TEMPERATURE - MIN	-10 °C
MAINS VOLTAGE - MAX	480 V
OUTPUT VOLTAGE - MAX	500 V
RELATIVE SYMMETRIC NET FREQUENCY TOLERANCE	10 %
RELATIVE SYMMETRIC NET VOLTAGE TOLERANCE	10 %
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
APPLICATION IN INDUSTRIAL AREA PERMITTED	Yes
MAINS VOLTAGE TOLERANCE	380 - 480 V (-10 %/+10 %, at 50/60 Hz)
PRODUCT CATEGORY	Speed controller
PROTECTION	Finger and back-of-hand proof, Protection against direct contact (BGV A3, VBG4)
RESOLUTION	0.1 Hz (Frequency resolution, setpoint value)
MOUNTING POSITION	Vertical
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	10 kA
OVERVOLTAGE CATEGORY	III
COMMUNICATION	AS-Interface

INTERFACE	
CONNECTION	Plug type: HAN Q5
CONVERTER TYPE	U converter
DEGREE OF PROTECTION	IP65 NEMA 12
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	1 HP
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT PVID	0 W
INPUT CURRENT ILN AT 150% OVERLOAD	2.5 A
MAINS CURRENT DISTORTION	120 %
PROTOCOL	AS-Interface profile cable: S-7.4 for 31 modules ASI
OVERLOAD CURRENT	For 60 s every 600 s At 40 °C
OVERLOAD CURRENT IL AT 150% OVERLOAD	3.6 A
RATED FREQUENCY - MAX	66 Hz
RATED FREQUENCY - MIN	45 Hz
RATED OPERATIONAL POWER AT 380/400 V, 50 HZ, 3-PHASE	1.5 kW
ASSIGNED MOTOR CURRENT IM AT 400 V, 50 HZ, 150% OVERLOAD	2.4 A
ASSIGNED MOTOR CURRENT IM AT 440 - 480 V, 60 HZ, 150% OVERLOAD	2.4 A
SYSTEM CONFIGURATION TYPE	Center-point earthed star network (TN-S network) AC voltage Phase-earthed AC supply systems are not permitted.
BRAKING CURRENT	≤ 0.6 A (max. 6 A for 120 ms), Actuator for external motor brake
ELECTROMAGNETIC COMPATIBILITY	1st and 2nd environments (according to EN 61800-3)
CURRENT LIMITATION	0.2 - 2.4 A, motor, main circuit Adjustable, motor, main

	circuit
BRAKING TORQUE	$\leq 30\%$ (I/Ie) Adjustable to 100 % (I/Ie), DC - Main circuit
BRAKING VOLTAGE	280/207 V DC -15 % / +10 % Actuator for external motor brake
CABLE LENGTH	C2 ≤ 5 m, maximum motor cable length C1 ≤ 1 m, maximum motor cable length C3 ≤ 25 m, maximum motor cable length
FUNCTIONS	3 fixed speeds For actuation of motors with mechanical brake 1 potentiometer speed
DELAY TIME	< 10 ms, Off-delay < 10 ms, On-delay
NUMBER OF INPUTS (ANALOG)	0
NUMBER OF INPUTS (DIGITAL)	4
RADIO INTERFERENCE CLASS	C2, C3: depending on the motor cable length, the connected load, and ambient conditions. External radio interference suppression filters (optional) may be necessary. C1: for conducted emissions only
NUMBER OF OUTPUTS (DIGITAL)	0
STARTING CURRENT - MAX	200 %, I _H , max. starting current (High Overload), For 2 seconds every 20 seconds, Power section
NUMBER OF PHASES (INPUT)	3
NUMBER OF PHASES (OUTPUT)	3
POWER CONSUMPTION	32 W
INTERFACES	Specification: S-7.4 (AS-Interface®) Max. total power consumption from AS-Interface® power supply unit (30 V): 190 mA Number of slave addresses: 31 (AS-Interface®)
EFFICIENCY	97 % (η)

RATED CONTROL VOLTAGE (UC)	24 V DC (-15 %/+20 %, external via AS-Interface® plug) 180/207 V DC (external brake 50/60 Hz)
SUPPLY FREQUENCY	50/60 Hz
LEAKAGE CURRENT AT GROUND IPE - MAX	3.5 mA
MAINS VOLTAGE - MIN	380 V
NOMINAL OUTPUT CURRENT I2N	2.4 A
NUMBER OF HW-INTERFACES (INDUSTRIAL ETHERNET)	0
NUMBER OF HW-INTERFACES (OTHER)	1
NUMBER OF HW-INTERFACES (PARALLEL)	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 INTERFACES (PROFINET)	0
NUMBER OF OUTPUTS (ANALOG)	0
OUTPUT AT LINEAR LOAD AT RATED OUTPUT VOLTAGE - MAX	0.75 kW
OUTPUT AT QUADRATIC LOAD AT RATED OUTPUT VOLTAGE - MAX	0.75 kW
OUTPUT FREQUENCY - MAX	500 Hz
OUTPUT FREQUENCY - MIN	0 Hz
SHORT-CIRCUIT PROTECTION (EXTERNAL OUTPUT CIRCUITS)	Type 1 coordination via the power bus' feeder unit, Main circuit
SHOCK RESISTANCE	15 g, Mechanical, According to IEC/EN 60068-2-27, 11 ms, Half-sinusoidal shock 11 ms, 1000 shocks per shaft
SWITCHING FREQUENCY	8 kHz, 4 - 32 kHz

	adjustable, fPWM, Power section, Main circuit
RATED OPERATIONAL CURRENT (IE)	2.4 A at 150% overload (at an operating frequency of 8 kHz and an ambient air temperature of +40 °C)
RATED OPERATIONAL VOLTAGE	400 V AC, 3-phase 480 V AC, 3-phase
VIBRATION	Resistance: According to IEC/EN 60068-2-6 Resistance: 10 - 150 Hz, Oscillation frequency Resistance: 6 Hz, Amplitude 0.15 mm Resistance: 57 Hz, Amplitude transition frequency on acceleration
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

□□□□:
□□□□:
□□□:
□□: