Speed controllers, 8.5 A, 4 kW, Sensor input 4, 400/480 V AC, AS-Interface  $^{\circ}$  S-7.4 for 31 modules, HAN Q4/2, with manual override switch, with fan



Part no. RASP5-8404A31-412R001S1 198855

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Product name	Eaton Moeller® series Rapid Link Speed controller
Part no.	RASP5-8404A31-412R001S1
EAN	4015081969135
Product Length/Depth	195 millimetre
Product height	270 millimetre
Product width	220 millimetre
Product weight	3.77 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	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 junc 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: drivesConnect Parameterization: Keypad Diagnostics and reset on device and via AS-Interface Parameterization: drivesConnect mobile (App) Internal and on heat sink, temperature-controlled Fan Parameterization: Fieldbus
Fitted with:	Key switch position AUTO IGBT inverter Manual override switch Key switch position OFF/RESET Key switch position HAND Fan PTC thermistor monitoring Selector switch (Positions: REV - OFF - FWD) Internal DC link Control unit PC connection Thermo-click with safe isolation Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation
Functions	For actuation of motors with mechanical brake 3 fixed speeds 1 potentiometer speed
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	ASI AS-Interface profile cable: S-7.4 for 31 modules
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	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: 10 - 150 Hz, Oscillation frequency Resistance: According to IEC/EN 60068-2-6 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 0.8 - 8.5 A, motor, main circuit
Delay time	< 10 ms, Off-delay < 10 ms, On-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 BLDC motors Synchronous reluctance motors Sensorless vector control (SLV) 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	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	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 second Power section
Supply frequency	50/60 Hz
Switching frequency	8 kHz, 4 - 32 kHz adjustable, fPWM, Power section, Main circuit
	5 HP

Braking to rique  Stroking village  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor brake  Adjaces V AC - 15 % / 110 %, Actuator for external motor for external motor actuator in a factor actuator of section of the control of the power bus? factor actuator of section of the power bus? factor actuator of section of the power actuator of section of the motor actuator of section of the power actuator of sequirements.  Actuator of the product standard is requirements.  Actuator of the product standard is requirements.  Actuator of insulating materials to normal heat  Actuator of insulating materials to normal	Braking current	≤ 0.6 A (max. 6 A for 120 ms), Actuator for external motor brake
Braking rollage  400/480 V AC-15 % / 10 %, Actuator for external motor brake  400/480 V AC-15 % / 10 %, Actuator for external motor brake  Type 1 Coordination via the power bus "feeder unit, Main circuit  Type 1 Coordination via the power bus "feeder unit, Main circuit  Type 1 Coordination via the power bus "feeder unit, Main circuit  Additional short-circuit persection (external output circuits)  Type 1 Coordination via the power bus "feeder unit, Main circuit  Additional Standard St		
Reted control voltage (Uc)  Short-circuit protection (external output circuits)  Type 1 coordination via the gower has 'feeder unit, Main circuit  Vipe 1 coordination via the gower has 'feeder unit, Main circuit  AQV480 V AC (external brake 50(00 Hz)  AV DC-15 %-120 %, external via AS-Interface® plug)  AS-Interface  Communication interface  AS-Interface  Ping type: HAN Q42  Sepedication: S-7.4 IAS-Interface®)  Number of sizes addresses. 31 (AS-Interface®)  Number of sizes addresses. 31 (AS-	Stating to que	
Type 1 coordination via the power bus 'feeder unit, Main circuit  Applast V AC (external brake 50600 Hz)  24 V DC (-15 % 428 %, external via A3-interface® plug)  A5-interface  Commercian  Plug type: FANA 04/2  Specification S-7.4 (A5-interface®)  Number of slave addresses 21 (A5-interface®)  Max. total power consumption from A5-interface®)  Max. total power consumption from A5-interface®)  Max. total power consumption from A5-interface®)  Max. total power consumption from A5-interface® power supply unit (30 V): 1  mA  Cable length  C3 < 25 m, maximum motor cable length  C2 < 5 m, maximum motor cable length  C2 = 5 m, maximum motor cable length  C3 = 6 m, maximum motor c	Braking voltage	400/480 V AC -15 % / +10 %, Actuator for external motor brake
Rated control voltage (Uc)  AS-Interface  AS-Interface  AS-Interface  AS-Interface  AS-Interface  Plug type: HAN Q4/2  Specification: S-74 (AS-Interface®) plug)  Interfaces  Specification: S-74 (AS-Interface®)  Number of silve addresses: \$11.62.00  Number of silve addresses: \$1.62.00  Number of silve addresses: \$1.62.00  Castle length  Castle length	Rated conditional short-circuit current (Iq)	10 kA
Communication interface Connection Communication interface Connection Communication interface Connection Plug type: HAN 04/2 Interfaces Spacifications - 7.4 (AS-Interface®) Natural power consumption from AS-Interface®) Natural power consumption from AS-Interface®) Natural power consumption from AS-Interface® power supply unit [30 V]: 1 mAS-Interface Cable length C3 ≤ 25 m, maximum motor cable length C2 ≤ 5 m, maximum motor cable length C2 ≤ 5 m, maximum motor cable length C3 ≤ 5 m, maximum motor cable length C4 ≤ 5 m, maximum motor cable length C5 ≤ 5 m, maximum motor cable length C6 ≤ 5 m, maximum motor cable length C7 ≤ 5 m, maximum motor cable length C8 ≤ 5 m, maxim	Short-circuit protection (external output circuits)	Type 1 coordination via the power bus' feeder unit, Main circuit
Connection  Plug type: HAN 04/2  Spocification: 5-74 (AS-Interface®) Max. total power consumption from AS-Interface®) Max. total power consumption from AS-Interface® Max. total power consumption from AS-Interface® Max. total power code length  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchge	Rated control voltage (Uc)	
Interfaces  Specification: S-7.4 (AS-Interface®) Number of slave addresses: 31 (AS-Interface®) Nam. total power consumption from AS-Interface®) Max. total power consumption from AS-Interface®) Max total power consumption from AS-Interface® power supply unit (30 V): 1 mA  Cable length  C3 ≤ 25 m, maximum motor cable length C1 ≤ 1 m, maximum motor cable length C2 ≤ 5 m, maximum motor cable length C1 ≤ 1 m, maximum motor cable length C2 ≤ 5 m, maximum motor cable length C3 ≤ 5 m, maximum motor cable length C4 ≤ 6 maximum motor cable length C4 ≤ 6 maximum motor cable length C4 ≤ 6 maximum motor cabl	Communication interface	AS-Interface
Number of slave addresses. 31 (AS-Interface®) Max. total power consumption from AS-Interface® power supply unit (30 V): 1 mA  Cable length  C2 < 25 m, maximum motor cable length C1 < 1 m, maximum motor cable length C2 5 m, max	Connection	Plug type: HAN Q4/2
C 1 s 1 m, maximum motor cable length C2 5 m, maximum motor cable length C2 6 m, maxim	Interfaces	Number of slave addresses: 31 (AS-Interface®)  Max. total power consumption from AS-Interface® power supply unit (30 V): 19
Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  In the panel builder's responsibility.  In the panel builder's responsibility. The specifications for the switchgear mus observed.  In the panel builder's responsibility. The specifications for the switchgear mus observed.  In the device meets the requirements, provided the information in the instruction observed.	Cable length	C1 ≤ 1 m, maximum motor cable length
Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  In the panel builder's responsibility.  Is the panel builder's responsibility.  The panel builder's responsibility. The specifications for the switchgear mus observed.  In the device meets the requirements, provided the information in the instruction of the device of the switchgear mus observed.  The device meets the requirements, provided the information in the instruction of the switchgear mus observed.	10.2.2 Corrosion resistance	Meets the product standard's requirements.
Meets the product standard's requirements.  Meets the product standard's requirements.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  In Internal electrical circuits and connections  Is the panel builder's responsibility.  In 192 Power-frequency electric strength  In 193 Impulse withstand voltage  In 194 Testing of enclosures made of insulating material  In 194 Testing of enclosures made of insulating material  In 195 The panel builder's responsibility.  In 196 Portection of excerning the panel builder's responsibility.  In 198 panel builder's responsibility.  In 198 panel builder's responsibility. The specifications for the switchgear must observed.  In 198 Mechanical function  The device meets the requirements, provided the information in the instruction	10.2.3.1 Verification of thermal stability of enclosures	Meets the product standard's requirements.
Meets the product standard's requirements.  10.2.5 Lifting  10.2.6 Mechanical impact  10.2.6 Mechanical impact  10.2.7 Inscriptions  10.3 Degree of protection of assemblies  10.3 Degree of protection of assemblies  10.4 Clearances and creepage distances  10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9 Power-frequency electric strength  10.9 Impulse withstand voltage  10.9 Is the panel builder's responsibility.  10.9 Tepperature rise  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  Meets the product standard's requirements.  10.6 Does not apply, since the entire switchgear needs to be evaluated.  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Is the panel builder's responsibility.  10.9.2 Power-frequency electric strength  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.15 Mechanical function  Meets the product standard's requirements.  10.16 Dees not apply, since the entire switchgear needs to be evaluated.  10.17 Internal electric standard's requirements.  10.18 Meets the product standard's requirements.  10.19 Dees not apply, since the entire switchgear needs to be evaluated.  10.19 Dees not apply, since the entire switchgear needs to be evaluated.  10.19 Legenton against electric shock  10.19 Legenton against electric shock  10.10 Temperature rise  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.14 Mechanical function  10.15 Mechanical function  10.16 Temperature rise requirements, provided the information in the instruction	10.2.3.2 Verification of resistance of insulating materials to normal heat	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 impact Does not apply, since the 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. 10.10 Temperature rise The panel builder's responsibility. The specifications for the switchgear mus observed. 10.12 Electromagnetic compatibility 10.12 Electromagnetic compatibility 10.13 Mechanical function  The device meets the requirements, provided the information in the instruction	10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects	Meets the product standard's requirements.
Does not apply, since the 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.  10.10 Temperature rise  The panel builder is responsibility.  10.10 Temperature rise  The panel builder's responsibility.  10.11 Short-circuit rating  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  10.12 Electromagnetic compatibility  The device meets the requirements, provided the information in the instruction	10.2.4 Resistance to ultra-violet (UV) radiation	Meets the product standard's requirements.
Meets the product standard's requirements.  10.3 Degree of protection of assemblies  Does not apply, since the entire switchgear needs to be evaluated.  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.  10.9.2 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.  10.10 Temperature rise  The panel builder is responsibility.  10.11 Short-circuit rating  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  10.12 Electromagnetic compatibility  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  10.13 Mechanical function  The device meets the requirements, provided the information in the instruction	10.2.5 Lifting	Does not apply, since the entire switchgear needs to be evaluated.
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Meets the product standard's requirements.  10.4 Clearances and creepage distances  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.  10.10 Temperature rise  The panel builder is responsibility. The specifications for the switchgear mus observed.  10.11 Short-circuit rating  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  10.13 Mechanical function  The device meets the requirements, provided the information in the instruction	10.2.7 Inscriptions	Meets the product standard's requirements.
Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.  In the panel builder's responsibility.  Is the panel builder's responsibility.  Is the panel builder's responsibility. The specifications for the switchgear must observed.  Is the panel builder's responsibility. The specifications for the switchgear must observed.  Is the panel builder's responsibility. The specifications for the switchgear must observed.  In the device meets the requirements, provided the information in the instruction	10.3 Degree of protection of assemblies	Does not apply, since the entire switchgear needs to be evaluated.
Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.  In panel builder's responsibility.  The panel builder is responsibility.  In panel builder is responsibility.  Is the panel builder is responsibility.  Is the panel builder is responsibility.  Is the panel builder is responsibility.  In panel builder is responsibility.  Is the panel builder is responsibility.  In pa	10.4 Clearances and creepage distances	Meets the product standard's requirements.
10.7 Internal electrical circuits and connections  Is the panel builder's responsibility.  The panel builder is responsibility.  The panel builder is responsibility at the devices.  Is the panel builder's responsibility. The specifications for the switchgear must observed.  Is the panel builder's responsibility. The specifications for the switchgear must observed.  Is the panel builder's responsibility. The specifications for the switchgear must observed.  The device meets the requirements, provided the information in the instruction.	10.5 Protection against electric shock	Does not apply, since the entire switchgear needs to be evaluated.
10.8 Connections for external conductors  Is the panel builder's responsibility.  The panel builder is responsibility.  The panel builder is responsible for the temperature rise calculation. Eaton wi provide heat dissipation data for the devices.  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  In 12 Electromagnetic compatibility  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  The device meets the requirements, provided the information in the instruction	10.6 Incorporation of switching devices and components	Does not apply, since the entire switchgear needs to be evaluated.
10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.13 Mechanical function  10.14 Is the panel builder's responsibility. The specifications for the switchgear must observed.  10.15 The panel builder's responsibility. The specifications for the switchgear must observed.  10.15 The device meets the requirements, provided the information in the instruction	10.7 Internal electrical circuits and connections	Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage  Is the panel builder's responsibility.  Is the panel builder's responsibility.  The panel builder is responsible for the temperature rise calculation. Eaton wi provide heat dissipation data for the devices.  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  In 12 Electromagnetic compatibility  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  In 13 Mechanical function  The device meets the requirements, provided the information in the instruction	10.8 Connections for external conductors	Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material  Is the panel builder's responsibility.  The panel builder is responsible for the temperature rise calculation. Eaton wi provide heat dissipation data for the devices.  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  10.12 Electromagnetic compatibility  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  10.13 Mechanical function  The device meets the requirements, provided the information in the instruction	10.9.2 Power-frequency electric strength	Is the panel builder's responsibility.
The panel builder is responsible for the temperature rise calculation. Eaton winder provide heat dissipation data for the devices.  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	10.9.3 Impulse withstand voltage	Is the panel builder's responsibility.
provide heat dissipation data for the devices.  10.11 Short-circuit rating  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  10.12 Electromagnetic compatibility  Is the panel builder's responsibility. The specifications for the switchgear mus observed.  10.13 Mechanical function  The device meets the requirements, provided the information in the instruction	10.9.4 Testing of enclosures made of insulating material	Is the panel builder's responsibility.
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	10.10 Temperature rise	The panel builder is responsible for the temperature rise calculation. Eaton wil provide heat dissipation data for the devices.
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	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