## DATASHEET - RASP5-8402A31-5120101S1

Speed controller, 8.5 A, 4 kW, Sensor input 4, 230/277 V AC, AS-Interface  $\ensuremath{\mathbb{R}}$ , S-7.4 for 31 modules, HAN Q5, with braking resistance, with fan



Part no.

RASP5-8402A31-5120101S1 198582

Product name	Eaton Moeller® series Rapid Link Speed controller
Part no.	RASP5-8402A31-5120101S1
EAN	4015081964574
Product Length/Depth	195 millimetre
Product height	270 millimetre
Product width	220 millimetre
Product weight	3.61 kilogram
Certifications	CE UL 61800-5-1 RoHS IEC/EN 61800-5-1 UL approval
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 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 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 Internal, temperature-controlled Fan Parameterization: drivesConnect Parameterization: Keypad Parameterization: Fieldbus Parameterization: drivesConnect mobile (App)
Fitted with:	Fan Internal DC link Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation PTC thermistor monitoring PC connection Selector switch (Positions: REV - OFF - FWD) Key switch position AUTO Key switch position HAND Braking resistance Control unit Breaking resistance Key switch position OFF/RESET IGBT inverter Thermo-click with safe isolation
Functions	For actuation of motors with mechanical brake 3 fixed speeds 1 potentiometer speed 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	
Product category	Speed controller
Protocol	AS-Interface profile cable: S-7.4 for 31 modules ASI
Radio interference class	C1: for conducted emissions only

Vertretor         m. 100 backs per shaf.           Vertretor         Restance #17. Appliable 35 mm           Abdue         Restance #17. Appliable 35 mm           Abdue         Above 1000 mv/h 15 performance reduction per 100 m           Anheet operating temperature - max		C2, C3: depending on the motor cable length, the connected load, and ambient conditions. External radio interference suppression filters (optional) may be necessary.
Interfact and a second product INS involve	Rated impulse withstand voltage (Uimp)	2000 V
Back resistance     Sp. Machanical. According to IEC PRI 9808-2-3, 11 ms. Hold intensed and an sp. 300 Methods. Sp at all in sp. 3	System configuration type	Center-point earthed star network (TN-S network)
Windiam       Image: 100 should be a shaft         Windiam       Image: 100 should be a shaft         Addiam       Image: 100 should be a shaft         Image: 100 should be a shaft       Image: 100 should be a shaft         Image: 100 should be a shaft       Image: 100 should be a shaft         Image: 100 should be a shaft       Image: 100 should be a should be	Mounting position	Vertical
Bestmarce 08.4 mighted 615 mm           Restmarce 08.4 mighted 615 mm           Addusion         Restmarce According in EC[00 00002-30           Addusion         Above 1000 with 15 performance reduction per 100 m           Addust operating temperaturo - max         40 C           Correct limitistica         28 - 15 A, notor, main circuit           Dilay time         28 - 15 A, notor, main circuit           Efficiency         48 - 10 C           Beta transf With types of the second with 15 CM Stope of the second with	Shock resistance	15 g, Mechanical, According to IEC/EN 60068-2-27, 11 ms, Half-sinusoidal shock 1 ms, 1000 shocks per shaft
Abient operation simple starter - max       -0 °C         Abient operating simple starter - max       -0 °C         Climatic proving       -10 °C C         Climatic proving       -10 °C C         Climatic proving       -10 °C C         Diary starter - max       -10 °C C         Diary starter - max       -10 °C C         Biels proving       -10 °C C         Diary starter - max       -10 °C C         Biels proving       -10 °C C         Biels proving and proving	Vibration	Resistance: 6 Hz, Amplitude 0.15 mm Resistance: 57 Hz, Amplitude transition frequency on acceleration
Ambient operating semperature - max     40°C       Ambient storage temperature - max     14°C       Dimeis profing     16°C       Dispatine     16°C       Dispatine     16°C       Dispatine     16°C       Dispatine     16°C       National Stars     16°C	Altitude	
Ambient storage temperature - mink     Image temperature - max     Image temperature - max       Dimatic proofing     Resourcement with ICLN 90171       Current limitation     Resourcement with ICLN 90171       Delay time     Resourcement with ICLN 90171       Efficiency     Resourcement with ICLN 90171       Hat dissipation at current/speed     Star 90 (Star Based)       Maine star dissipation at current/speed     Star 90 (Star Based)       Maine star dissipation at current/speed     Star 90 (Star Based)       Maine star dissipation at current/speed     Star 90 (Star Based)       Maine star dissipation at current star 90% speed     Star 90 (Star Based)       Maine star ground PER - max     Star 90 (Star Based)       Maine vanted star ground PER - max     Star 90 (Star Based)       Maine vanted star ground PER - max     Star 90 (Star Based)       Maine vanted star ground PER - max     Star 90 (Star Based)       Maine vanted star ground PER - max     Star 90 (Star Based)       Maine vanted star ground PER - max     Star 90 (Star Based)       Maine vanted star ground PER - max     Star 90 (Star Based)       Maine vanted star ground PER - max     Star 90 (Star Based)       Maine vanted star ground PER -	Ambient operating temperature - min	-10 °C
Anbient storage toroning       No C         Clineatic proofing       In accordance with IE(CN SU778         Current limitation       B & 8.5 A, metar, main circuit         Disystime       B & 8.5 A, metar, main circuit         Disystime       S & 95 M, in condensation         Efficiency       B & 8.5 M, metar, main circuit         Hat dissipation at current/speed       S & 95 M, in condensation         Jack dissipation at current/speed       S & 95 M, in condensation         Injugat current IIN at 159% overload       S & 95 M, in condensation         Injugat current IIN at 159% overload       S & 96 M, in condensation         Injugat current IIN at 159% overload       S & 96 M, in condensation         Injugat current IIN at 159% overload       S & 96 M, in condensation         Injugat current IIN at 159% overload       S & 96 M, in condensation         Injugat current IIN at 159% overload       S & 96 M, in condensation         Injugat current IIN at 159% overload       S & 96 M, in condensation         Injugat current IIN at 159% overload       S & 96 M, in condensation         Injugat current IIN at 159% overload       S & 96 M, in condensation         Injugat current IIN at 159% overload       S & 96 M, in condensation         Injugat current IIN at 159% overload       S & 96 M, in condensation         Injugat current IIN at	Ambient operating temperature - max	40 °C
Dimetic proofing       In accordance with EDEN 50178         Diverset limitation       03 - 55 A, motor main sicula         Diverset limitation       03 - 55 A, motor main sicula         Diverset limitation       03 - 55 A, motor main sicula         Diverset limitation       03 - 55 A, motor main sicula         Efficiency       03 - 55 A, motor main sicula         Hat dissipation at current/speed       51 6W at 25% current and 5% speed         Status at dissipation at current/speed       51 6W at 25% current and 5% speed         Additional Status at a status at provided       53 5W at 25% current and 5% speed         Lakage current at ground PE - max       53 5W at 25% current and 5% speed         Mains voltage name       53 5W at 25% current and 5% speed         Mains voltage name       53 5W at 25% current and 5% speed         Mains voltage name       53 5W at 25% current and 5% speed         Mains voltage name       53 5W at 25% current and 5% speed         Mains voltage name       53 5W at 25% current and 5% speed         Mains voltage name       53 5W at 25% current and 5% speed         Mains voltage name       53 5W at 25% current and 5% speed         Mains voltage name       55 5W at 25% current and 5% speed         Mains voltage name       55 5W at 25% current and 5% speed         Mains voltage name       55 5W	Ambient storage temperature - min	-40 °C
Dinatic profing       In accordance with EDEN 5078         Current linkation       0.8 -65 A, motor, main circuit, and construction         Diary time       0.8 -65 A, motor, main circuit, and construction         Diary time       10 ms, 0n datay         Efficiency       10 ms, 0n datay         Head solution at current/speed       9.8 (m)         Solution at current/speed       9.8 (m)         Lassing current and SNs speed       5.8 W at SNs current and SNs speed         Additional at current/speed       3.8 -64 A, motor, main circuit, and SNs speed         Lassing current link at 150% overload       3.8 - 40 at SNs current and SNs speed         Lassing current link at 150% overload       3.8 - 40 at SNs current and SNs speed         Lassing current link at 150% overload       3.8 - 40 at SNs current and SNs speed         Lassing current link at 150% overload       3.8 - 40 at SNs current and SNs speed         Lassing current link at 150% overload       3.8 - 40 at SNs current and SNs speed         Mains current link at 150% overload       3.8 - 40 at SNs current and SNs speed         Mains current link at 150% overload       3.8 - 40 at SNs current and SNs speed         Mains current link at 150% overload       3.8 - 40 at SNs current and SNs speed         Mains current link at 150% overload       3.8 - 40 at SNs current and SNs speed         Mains current link		
Adjustable, motor, main circuitDelay timeColors, OridalyEfficiency95 % (n)Hat dissipation at current/speed95 % (n)But current Lint 150% overhaat95 % (n)But current Lint 150% overhaat96 % (n)Mains voltage - max96 % (n)Mains voltage - max96 % (n)Mains voltage - max96 % (n)But current Lint 150% overhaat96 % (n)Duturt frequency - max96 % (n)Duturt frequency - max96 % (n)Duturt frequency - max96 % (n)Duturt frequency - min96 % (n)Batel frequency - min96 % (n)Batel frequency - min96 % (n)Batel frequency - min96	Climatic proofing	
EfficiencyImage: Construct displaying and the speedEfficiencyBSK wit 75% current and 0% speedHeat dissipation at current/speedBSK wit 75% current and 0% speedBis wit 75% current and 0% speedBSK wit 75% current and 0% speedBis wit 75% current and 0% speedBSK wit 75% current and 0% speedBis wit 75% current and 0% speedBSK wit 75% current and 0% speedBis wit 75% current and 0% speedBSK wit 75% current and 0% speedBis wit 75% current and 0% speedBSK wit 75% current and 0% speedBis wit 25% current and 0% speedBSK wit 75% current and 0% speedMains current distortionConst Const	Current limitation	
Hat dissipation at current/speed       51.6 W at 25% current and 0% speed         Bit W at 25% current and 0% speed       53.8 W at 25% current and 0% speed         Bit W at 05% current and 0% speed       53.4 W at 25% current and 0% speed         Bit W at 05% current and 0% speed       53.4 W at 05% current and 0% speed         Bit W at 05% current and 0% speed       53.4 W at 05% current and 0% speed         Bit W at 05% current and 0% speed       53.4 W at 05% current and 0% speed         Bit W at 05% current and 0% speed       53.4 W at 05% current and 0% speed         Bit W at 05% current and 0% speed       53.4 W at 05% current and 0% speed         Bit W at 05% current and 0% speed       53.4 W at 05% current and 0% speed         Bit W at 05% current and 0% speed       53.4 W at 05% current and 0% speed         Bit W at 05% current and 0% speed       53.4 W at 05% current and 0% speed         Bit W at 05% current and 0% speed       53.4 W at 05% current and 0% speed         Mains voltage - max       50.4 M at 05% unrent and 0% speed         Mains voltage - max       60.4 M at 0.4 M (unrent at 0.4 M (unr	Delay time	
S38 Wat 25% current and 50% speed         Signed wat 55% current and 50% speed         Mains current at ground FE - max         Mains surtant distribution	Efficiency	98 % (η)
Lekakage current at ground IPE - max       55 mA         Mains current distortion       10 %         Mains switch-on frequency       Maximum of one time every 60 seconds         Mains voltage - max       400 V         Mains voltage - min       300 V         Mains voltage tolerance       300 - 480 V (-10 %/+10 %, at 50/60 Hz)         Operating mode       For too toos         Wind and LSPM motors       WM and LSPM motors         Whand LSPM motors       WM and LSPM motors         Voltage tolerance       600 Hz         Output frequency - max       600 Hz         Overload current       600 Hz         Naked degrational coverload       600 Hz         Rated drequency - min       600 Hz         Overload current (La 150% overload       600 Hz         Rated drequency - min       600 Hz         Rated drequency - max       600 Hz         Rated operational covernat (La 150% overload       600 Hz         Rated operational covernat (Le)       600 Hz         Rated operational cover nait       600 Hz         Rated operational covernat (Le)       600 Hz         Rated operational covernat (Le)       600 Hz         Rated operational covernat (Le)       600 Hz         Rated operational covernat (Le) <t< th=""><th>Heat dissipation at current/speed</th><th>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</th></t<>	Heat dissipation at current/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
Mains current distortion       IO %         Mains switch-on frequency       Maximum of one time every 60 seconds         Mains voltage - max       Maximum of one time every 60 seconds         Mains voltage - min       S00 V         Mains voltage tolerance       S00 - 480 V (-10 %/+10 %, at 50/60 Hz)         Operating mode       SDD and LSPM motors W/r control         Output frequency - max       SDD Hz         Output frequency - max       SDD Hz         Output frequency - max       SDD Hz         Overload current IL at 150% overload       SDE SCH	Input current ILN at 150% overload	7.8 A
Mains switch-on frequency       Mains und on e time every 60 seconds         Mains voltage - max       40 V         Mains voltage tolerance       30 V         Operating mode       BLDC motors         Operating mode       BLDC motors         Output frequency - max       Source         Output frequency - min       500 Hz         Overload current IL at 150% overload       FFF         Rated operational current (lei)       FFF         Rated operational overlaad       FFF         Rated operational overlaad       FFF         Rated operational voltage       FFF	Leakage current at ground IPE - max	3.5 mA
Mains voltage - max       600 4         Mains voltage tolerance       380 - 480 V (-10 %/+10 %, at 50/60 Hz)         Operating mode       380 - 480 V (-10 %/+10 %, at 50/60 Hz)         Operating mode       580 - 480 V (-10 %/+10 %, at 50/60 Hz)         Output frequency - max       BLOC motors PM and LSPM motors UV and LSPM mo	Mains current distortion	120 %
Mains voltage nim       380 V         Mains voltage tolerance       380 - 480 V (-10 %, at 50/60 Hz)         Operating mode       Store of the	Mains switch-on frequency	Maximum of one time every 60 seconds
Mains voltage tolerance       Star 480 V (10 %/ 10 %, at 50/60 Hz)         Operating mode       Star 480 V (10 %/ 10 %, at 50/60 Hz)         Operating mode       Star 480 V (10 %/ 10 %, at 50/60 Hz)         Output frequency max       Star 58         Output frequency - min       OHz         Overload current       OH2         Overload current Lat 150% overload       OHE         Rated frequency - max       Comport Star 50% overload         Rated operational current (le)       Star 58         Rated operational power at 380/400 V, 50 Hz, 3-phase       Star 58         Rated operational voltage       Star 59% overload (at an operating frequency of 8 Hz and an ambient at the pare atture of 40 °C)         Rated operational voltage       Star 58         Rated operational voltage       Star 58         Rated operational voltage       Star 50% overload (at an operating frequency of 8 Hz and an ambient at the pare atture of 40 °C)         Rated operational voltage       Star 58         Rated	Mains voltage - max	480 V
Operating mode         Description         BLDC motors           Dutput frequency - max         PM and LSPM motors         PM and LSPM motors           Output frequency - max         500 Hz         500 Hz           Output frequency - min         0 Hz         0 Hz           Overload current         6 Hz         6 Hz           Rated frequency - min         6 Hz         6 Hz           Rated frequency - max         6 Hz         6 Hz           Rated frequency - max         8 HZ         6 Hz           Rated operational current (le)         8 HZ         6 Hz           Rated operational current (le)         8 HZ         6 Hz           Rated operational ovotage         6 HZ         6 HZ	-	380 V
PM and LSPM motors       V/Y control         Output frequency - max       500 Hz         Output frequency - min       0 Hz         Output frequency - min       0 Hz         Overload current       10 Hz         Overload current       10 Hz         Rated frequency - max       127 A         Rated frequency - max       127 A         Rated frequency - max       66 Hz         Rated frequency - min       55 A at 150% overload (at an operating frequency of 8 kHz and an ambient at imperature of +40 °C)         Rated frequency - max       440 °C         Rated operational current (le)       4 kW         Rated operational power at 380/400 V, 50 Hz, 3-phase       4 kW         Rated operational voltage       4 kW         Rated operational voltage       11 Hz (Frequency resolution, setpoint value)         Stating current - max       00 V, H, max. starting current (High Overload), For 2 seconds every 20 seconds over section	-	
Output frequency - min       0 Hz         Overload current       6 Ma °C         Overload current IL at 150% overload       2.7 A         Rated frequency - max       6 Ma C         Rated frequency - min       6 Ma C         Rated operational current (le)       8.5 A at 150% overload (at an operating frequency of 8 kHz and an ambient at the more at 380/400 V, 50 Hz, 3-phase         Rated operational power at 380/400 V, 50 Hz, 3-phase       4 kW         Rated operational voltage       0 V AC, 3-phase 480 V AC, 3-pha	Operating mode	PM and LSPM motors U/f control Sensorless vector control (SLV)
Dverload current       At 40 °C For 60 s every 600 s         Dverload current Lat 150% overload       12.7 A         Rated frequency - max       66 Hz         Rated frequency - min       55 Hz         Rated operational current (le)       45 Hz         Rated operational power at 380/400 V, 50 Hz, 3-phase       46 W         Rated operational coursed (le no perating frequency of 8 kHz and an ambient at at the more at at 800 V AC, 3-phase       400 V AC, 3-phase         Rated operational voltage       60 V AC, 3-phase       400 V AC, 3-phase         Resolution       01 Hz (Frequency resolution, setpoint value)       01 Hz (Frequency resolution, setpoint value)	Output frequency - max	500 Hz
Image: state operational voltage       For 60 severy 600 s         Resolution       500 severy 600 s         Statting current (max       60 kz         Statting current (max       60 kz <tr< td=""><td></td><td></td></tr<>		
Rated frequency - max       6 Hz         Rated frequency - min       5 Hz         Rated operational current (le)       5 A at 150% overload (at an operating frequency of 8 kHz and an ambient at temperature of +40 °C)         Rated operational power at 380/400 V, 50 Hz, 3-phase       4 kW         Rated operational voltage       60 Hz         Rated operational voltage       0 V AC, 3-phase         Resolution       0.1 Hz (Frequency resolution, setpoint value)         Starting current - max       00 %, H, max. starting current (High Overload), For 2 seconds every 20 s	Overload current	
Rated frequency - min       45 Hz         Rated operational current (le)       5.5 A at 150% overload (at an operating frequency of 8 kHz and an ambient air temperature of +40 °C)         Rated operational power at 380/400 V, 50 Hz, 3-phase       4 kW         Rated operational voltage       4 kW         Rated operational voltage       11 Hz (Frequency resolution, setpoint value)         Resolution       0.1 Hz (Frequency resolution, setpoint value)         Starting current - max       200 %, IH, max. starting current (High Overload), For 2 seconds every 20 seconds e	Overload current IL at 150% overload	12.7 A
Rated operational current (le)       8.5 A at 150% overload (at an operating frequency of 8 kHz and an ambient air temperature of +40 °C)         Rated operational power at 380/400 V, 50 Hz, 3-phase       4 kW         Rated operational voltage       400 V AC, 3-phase         Resolution       0.1 Hz (Frequency resolution, setpoint value)         Starting current - max       00%, IH, max. starting current (High Overload), For 2 seconds every 20 seconds	Rated frequency - max	66 Hz
Rated operational power at 380/400 V, 50 Hz, 3-phase     temperature of +40 °C)       Rated operational voltage     4 kW       Rated operational voltage     400 V AC, 3-phase       Resolution     11 Hz (Frequency resolution, setpoint value)       Starting current - max     200 %, IH, max. starting current (High Overload), For 2 seconds every 20 seconds		
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 se		8.5 A at 150% overload (at an operating frequency of 8 kHz and an ambient air temperature of +40 °C)
Resolution     480 V AC, 3-phase       Starting current - max     0.1 Hz (Frequency resolution, setpoint value)       200 %, IH, max. starting current (High Overload), For 2 seconds every 20 seconds	Rated operational power at 380/400 V, 50 Hz, 3-phase	
Starting current - max       200 %, IH, max. starting current (High Overload), For 2 seconds every 20	Rated operational voltage	
Power section	Resolution	
Supply frequency 50/60 Hz	Starting current - max	200 %, IH, max. starting current (High Overload), For 2 seconds every 20 seconds, Power section
	Supply frequency	50/60 Hz

Assigned motor power at 460/480 V, 60 Hz, 3-phase	5 HP
Braking current	$\leq$ 0.6 A (max. 6 A for 120 ms), Actuator for external motor brake
Braking torque	Adjustable to 100 % (I/Ie), DC - Main circuit ≤ 30 % (I/Ie)
Braking voltage	230/277 V AC -15 % / +10 %, Actuator for external motor brake
Switch-on threshold for the braking transistor	765 V DC
Rated conditional short-circuit current (Iq)	10 kA
Short-circuit protection (external output circuits)	Type 1 coordination via the power bus' feeder unit, Main circuit
Rated control voltage (Uc)	230/277 V AC (external brake 50/60 Hz) 24 V DC (-15 %/+20 %, external via AS-Interface® plug)
Communication interface	AS-Interface
Connection	Plug type: HAN Q5
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®)
Cable length	C3 ≤ 25 m, maximum motor cable length C1 ≤ 1 m, maximum motor cable length C2 ≤ 5 m, maximum motor cable length
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 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 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 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)</td>

 Electric engineering, automation, process control engineering / Electrical drive / Static frequency converter = < 1 kV (ecl@ss10.0.1-27-02-31-01 [AKE177014])</td>

 Mains voltage
 V
 380 - 480

 Number of phases input
 50/60 Hz
 3

 Number of phases output
 Electric engineering
 30 - 480

 Max. output frequency
 Hz
 500

Max. output voltage	V	500
Nominal output current I2N	А	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
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 parallel		0
Number of HW-interfaces other		1
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		195
Deptil	mm	190