Speed controller, 2.4 A, 0.75 kW, Sensor input 4, AS-Interface \$, S-7.4 for 31 modules, HAN Q5, with manual override switch, with braking resistance



Part no. RASP5-2400A31-512R100S1 198551

| Product name   | Fotos Masilas Parid List Conductivity  |
|--|--|
| Product name   | Eaton Moeller® series Rapid Link Speed controller  |
| Part no.   | RASP5-2400A31-512R100S1  |
| EAN De la character de la char | 4015081964260  |
| Product Length/Depth   | 157 millimetre   |
| Product height   | 270 millimetre   |
| Product width  | 220 millimetre   |
| Product weight   | 3.59 kilogram  |
| Certifications   | RoHS UL approval UL 61800-5-1 IEC/EN 61800-5-1 CE  |
| 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 mobile (App) Parameterization: drivesConnect Diagnostics and reset on device and via AS-Interface Parameterization: Fieldbus Parameterization: Keypad  |
| Fitted with:   | Internal DC link Key switch position OFF/RESET Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation PC connection Key switch position HAND PTC thermistor monitoring Control unit Manual override switch Key switch position AUTO Selector switch (Positions: REV - OFF - FWD) Thermo-click with safe isolation Breaking resistance IGBT inverter Braking resistance  |
| Functions  | 1 potentiometer speed Brake chopper with braking resistance for dynamic braking 4-quadrant operation possible 3 fixed speeds   |
| Degree of protection   | IP65<br>NEMA 12  |
| 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   | 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  |

| System configuration type                            | AC voltage  |
|--|---|
|  | Phase-earthed AC supply systems are not permitted. Center-point earthed star network (TN-S network)   |
| 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: 57 Hz, Amplitude transition frequency on acceleration<br>Resistance: 6 Hz, Amplitude 0.15 mm<br>Resistance: According to IEC/EN 60068-2-6<br>Resistance: 10 - 150 Hz, Oscillation frequency   |
| Altitude   | Above 1000 m with 1 % performance reduction per 100 m<br>Max. 2000 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<br>0.2 - 2.4 A, motor, main circuit   |
| Delay time   | < 10 ms, Off-delay<br>< 10 ms, On-delay   |
| Efficiency   | 97 % (η)  |
| 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 |
| Input current ILN at 150% overload                   | 2.5 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 PM and LSPM motors Sensorless vector control (SLV)  |
| Output frequency - max                               | 500 Hz  |
| Output frequency - min                               | 0 Hz  |
| Overload current                                     | For 60 s every 600 s<br>At 40 °C  |
| Overload current IL at 150% overload                 | 3.6 A   |
| Rated frequency - max                                | 66 Hz   |
| Rated frequency - min                                | 45 Hz   |
| Rated operational current (Ie)                       | 2.4 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 | 0.75 kW   |
| Rated operational voltage                            | 480 V AC, 3-phase<br>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   |
|  |   |

| Braking current Braking current Braking current Braking current Braking current Braking current Switch-on threshold for the braking transistor  Braked control voltage (Uo) Braking gratectical (autemnt Mg) Braked control voltage (Uo) Braking gratectical (autemnt Mg) Braked control voltage (Uo) Braked control  |  |   |
|--|--|---|
| Seventh- on threshold for the braking transistor  Reted conditional short-circuit current (Irg)  Short-circuit prosection (external output circuits)  Reted control voltage (Uc)  Reted control voltage (Uc)  Reted control voltage (Uc)  Communication interface  Communicatio | Braking current  | $\leq$ 0.6 A (max. 6 A for 120 ms), Actuator for external motor brake |
| Rated conditional short-circuit current (le)  Short-circuit protection (external output circuits)  Rated control voltage (Uc)  Communication interface  Connection  Communication interface  Connection  Interfaces  As -Interface power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (30 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (40 Nr. 198)  Max. total power consumption from As-Interface® power supply unit (40 Nr. 198)  Max. total power consumptio | Braking torque   | Adjustable to 100 % (I/Ie), DC - Main circuit                         |
| Short-circuit protection (external output circuits)  Rated control voltage (Uc)  Communication interface Commercian  Interfaces Commercian  Interfaces Commercian  Interfaces  Commercian  Interfaces  | Switch-on threshold for the braking transistor                                   | 765 V DC  |
| Rated control voltage (Uc)  24 V D C (-15 %/-20 %, external via AS-Interface® plug)  Communication interface  AS-Interface  Consection  Plug type: HAN GS  Max. total power consumption from AS-Interface® power supply unit (30 VI: 190 mA  | Rated conditional short-circuit current (Iq)                                     | 10 kA   |
| Communication interface Connection Put type: HAN D5 Interfaces Max. Ital power consumption from AS-Interface® power supply unit (30 V): 190 m A Specification: S;7.4 (AS-Interface®) Number of slave addresses: 31 (AS-Interface®) Number of slave addresses | Short-circuit protection (external output circuits)                              | Type 1 coordination via the power bus' feeder unit, Main circuit      |
| Cable length  Ca | Rated control voltage (Uc)   | 24 V DC (-15 %/+20 %, external via AS-Interface® plug)                |
| Interfaces    Max. total power consumption from AS-Interface® power supply unit (30 V): 190 and AS-pecification: S-7.4 (AS-Interface®) Number of slave addresses: 31 (AS-Interface®) Number of slave addresses | Communication interface  | AS-Interface  |
| Specification of resistance  10.2.2 Corrosion resistance  10.2.3.1 Verification of thermal stability of enclosures  10.2.3.2 Verification of thermal stability of enclosures  10.2.3.3 Resist of insul. mat. to abnormal heat/fire by internal elect. effects  10.2.3.3 Resist of insul. mat. to abnormal heat/fire by internal elect. effects  10.2.4.3 Resistance to ultra-violet (UV) radiation  10.2.5 Lifting  10.2.5 Internal impact  10.2.5 Lifting  10.2.5 Lifting  10.2.5 Internal impact  10.3.5 Lifting  10.3.5 Lifting  10.3.5 Lifting  10.4.5 Lifting  10.5 Protection of assemblies  10.5 Protection against electric shock  10.5 Protection against electric shock  10.5 Incorporation of switching devices and components  10.5 Incorporation of switching devices and components  10.5 Protection against electric shock  10.5 Incorporation of switching devices and components  10.5 Protection spainst electric is clicuits and connections  10.5 Incorporation of switching devices and components  10.5 Incorporation of switching devices and condictors  10.5 Incorporation of switching devices and condictors  10.6 Incorporation of switching devices and condictors  10.7 Internal electrical circuits and connections  10.8 Internal electrical circuits and connections  10.9 Internal electrical circuits and connections  10.1 Internal electrical circuits a | Connection   | Plug type: HAN Q5   |
| C1 ≤ 1 m, maximum motor cable length C2 ≤ 5 m, maximum potor cable length C2 ≤ 6 m, maximum potor cable lunds's requirements. C2 ≤ 6 m, maximum potor cable lunds's requirements. C2 ≤ 10 m, maximum potor cable lunds's requirements. C2 ≤ 10 m, maximum potor cable lunds's requirements. C3 ≤ 10 m, maximum potor cable lunds's responsibility. C4 ≤ 10 m, maximum potor cable lunds's res | Interfaces   | mA<br>Specification: S-7.4 (AS-Interface®)                            |
| 10.2.3.1 Verification of thermal stability of enclosures 10.2.3.2 Verification of resistance of insulating materials to normal heat 10.2.3.2 Resists. of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.3.3 Resists. of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.6 Mechanical impact 10.2.6 Mechanical impact 10.2.7 Inscriptions 10.2.7 Inscriptions 10.2.8 Inscriptions 10.2.8 Inscriptions 10.2.9 To pose not apply, since the entire switchgear needs to be evaluated. 10.2.7 Inscriptions 10.2.8 Inscriptions 10.3.8 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 10.9.4 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 10.13 Mechanical function 10.13 Mechanical function 10.13 Mechanical function 10.14 Mechanical function 10.15 The device meets the requirements, 10.15 The device meets the requirements is an evaluated in the instruction of the switchgear must be observed. 10.15 The device meets the requirements, 10.16 Electromagnetic compatibility 10.16 Electromagnetic compatibility 10.17 The device meets the requirements, 10.18 Meets the product standard's requirements. 10.19 Meets the product standard's | Cable length   | C1 ≤ 1 m, maximum motor cable length                                  |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat 10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.6 Mechanical impact 10.2.6 Mechanical impact 10.2.7 Inscriptions 10.2.7 Inscriptions 10.2.7 Inscriptions 10.2.6 Mechanical impact 10.2.7 Inscriptions 10.2.7 Inscriptions 10.2.8 Meets the product standard's requirements. 10.3.0 Eagree of protection of assemblies 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 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 10.13 Mechanical function 10.14 Meets the product standard's requirements. 10.15 Meets the product standard's requirements. 10.15 Meets the product standard's requirements. 10.16 Meets the product standard's requirements. 10.17 Meets the product standard's requirements. 10.18 Meets the product standard's requirements. 10.19 Meets the product standard's requirements. 10.19 Meets the product standard's requirements. 10.19 Insurance the entire switchgear meets to be evaluated. 10.19 Insurance the entire switchgear meets to be evaluated. 10.19 Insurance the entire switchgear meets to be evaluated. 10.19 Insurance the entire switchgear meets to be evaluated. 10.19 Insurance the entire switchgear meets to be evaluated. 10.19 Insurance the entire switchgear meets to be evaluated. | 10.2.2 Corrosion resistance  | Meets the product standard's requirements.                            |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat 10.2.3.3 Resists. of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.6 Meets the product standard's requirements. 10.2.6 Meets the product standard's requirements. 10.2.6 Mechanical impact 10.2.6 Mechanical impact 10.2.7 Inscriptions 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 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.9 Power-frequency electric strength 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 10.13 Mechanical function 10.13 Mechanical function 10.14 Electromagnetic compatibility 10.15 Mechanical function 10.15 Mechanical function 10.15 Mechanical function 10.15 Mechanical function 10.16 Meets the product standard's requirements. 10.17 Meet the entire switchgear needs to be evaluated. 10.18 Meets the product standard's requirements. 10.19 Les the panel builder's responsibility. 10.19 Les panel builder's responsibility. 10.19 Les panel builder's responsibility. 10.10 Temperature rise 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function  | 10.2.3.1 Verification of thermal stability of enclosures                         | 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.  Meets the product standard's requirements.  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.  10.9.2 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  10.10 Temperature rise  The panel builder's responsibility. The specifications for the switchgear must be observed.  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  The device meets the requirements, provided the information in the instruction.   |  | Meets the product standard's requirements.                            |
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| 10.2.6 Mechanical impact  10.2.7 Inscriptions  Meets the product standard's requirements.  10.3 Degree of protection of assemblies  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  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9 Power-frequency electric strength  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.13 Mechanical function  10.14 Electromagnetic function  10.15 Meets the product standard's requirements.  10.16 Meets the product standard's requirements.  10.17 Meets the panel builder's responsibility.  10.18 Incorporation of switching devices and components  10.19 Meets the panel builder's responsibility.  10.10 Temperature rise  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.14 Meets the product standard's requirements.  10.15 Meets the product standard's requirements.  10.16 Meets the product standard's requirements.  10.17 Meets the panel builder's responsibility.  10.18 The panel builder's responsibility.  10.19 The panel builder's responsibility.  10.10 Temperature rise  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.14 Meets the product standard's requirements.  10.15 Meets the product standard's requirements.  10.16 Meets the product standard's requirements.  10.17 Meets the product standard's requirements.  10.18 Meets the product standard's requirements.  10.19 Meets the product standard's requirements.  10.19 Meets the product standard's requirements.  10.19 Meets the product standa | 10.2.4 Resistance to ultra-violet (UV) radiation                                 | Meets the product standard's requirements.                            |
| 10.2.7 Inscriptions  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  10.10 Temperature rise  The panel builder is responsibility. The specifications for the switchgear must be observed.  10.11 Short-circuit rating  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  10.12 Electromagnetic compatibility  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.    |
| 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.  10.9.2 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 must be observed.  10.11 Short-circuit rating  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  10.12 Electromagnetic compatibility  The device meets the requirements, provided the information in the instruction.  | 10.2.6 Mechanical impact   | Does not apply, since the entire switchgear needs to be evaluated.    |
| 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  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  10.6 be 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  10.10 Temperature rise  The panel builder is responsibility.  10.11 Short-circuit rating  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  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.                            |
| 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  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.5 Protection against electric shock  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.  Is the panel builder's responsibility.  Is the panel builder's responsibility.  The panel builder is responsibility.  The panel builder is responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be 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.    |
| 10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.10 Mechanical function  10.10 Temperature rise possibility  10.11 Short-circuit requirements, provided the information in the instruction of the device meets the requirements, provided the information in the instruction of the switchgear must be observed.  | 10.4 Clearances and creepage distances   | Meets the product standard's requirements.                            |
| 10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.13 Mechanical function  10.14 Short-circuits and connections  10.15 Is the panel builder's responsibility.  10.16 Is the panel builder's responsibility.  10.17 Is the panel builder's responsibility.  10.18 Short-circuit rating  10.19 Short-circuit rating  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.14 Short-circuit rating  10.15 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  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.13 Mechanical function  10.14 Short-circuits strength  10.15 the panel builder's responsibility.  10.16 Is the panel builder's responsibility.  10.17 Is the panel builder is responsibility.  10.18 Is the panel builder is responsibility.  10.19 Is the panel builder's responsibility. The specifications for the switchgear must be observed.  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.14 Is the panel builder's responsibility. The specifications for the switchgear must be observed.  10.15 In 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  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  11.10 Temperature rise panel builder's responsibility. The specifications for the switchgear must be observed.  10.12 Mechanical function  11.13 The panel builder's responsibility. The specifications for the switchgear must be observed.  10.13 Mechanical function  11.14 The panel builder's responsibility. The specifications for the switchgear must be 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  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.13 Mechanical function  10.14 The panel builder's responsibility.  15 the panel builder is responsibility.  16 the panel builder is responsibility.  17 The panel builder is responsibility.  18 the panel builder's responsibility. The specifications for the switchgear must be observed.  19 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  10.10 Temperature rise  10.11 Short-circuit rating  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 be observed.  10.15 the panel builder's responsibility. The specifications for the switchgear must be observed.  10.15 Is the panel builder's responsibility. The specifications for the switchgear must be observed.  10.16 The device meets the requirements, provided the information in the instruction   | 10.9.2 Power-frequency electric strength   | 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 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   | 10.9.3 Impulse withstand voltage   | Is the panel builder's responsibility.                                |
| provide heat dissipation data for the devices.  10.11 Short-circuit rating  15 the panel builder's responsibility. The specifications for the switchgear must be observed.  10.12 Electromagnetic compatibility  15 the panel builder's responsibility. The specifications for the switchgear must be observed.  16 the panel builder's responsibility. The specifications for the switchgear must be observed.  17 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 b observed.  10.13 Mechanical function The device meets the requirements, provided the information in the instruction   | 10.10 Temperature rise   |   |
| observed.  10.13 Mechanical function  The device meets the requirements, provided the information in the instruction   | 10.11 Short-circuit rating   |   |
|  | 10.12 Electromagnetic compatibility  |   |
|  | 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  | 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  | 2.4       |  |  |  |
| Max. output at quadratic load at rated output voltage  | kW | 0.75      |  |  |  |
| Max. output at linear load at rated output voltage   | kW | 0.75      |  |  |  |

| 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  | mm | 157         |
|  |    |             |