



Speed controller, 3.3 A, 1.1 kW, 230/277 V AC, AS-Interface®, S-7.4 for 31 modules, with manual override switch



**Part no.** RASP-302AI1S0-C32RS1  
**Catalog No.** 150209  
**Alternate Catalog No.** RASP-302AI1S0-C32RS1

## Delivery program

|   |          |    |  |
|---|----------|----|--|
|   |          |    | This item is only available until 06/30/2020, after which it will be replaced with the following item: Y7-198561, RASP5-4202A31-512R000S1  |
| Product range   |          |    | Speed controller   |
| Rated operational voltage   | $U_e$    |    | 400 V AC, 3-phase<br>480 V AC, 3-phase   |
| Output voltage with $V_e$   | $U_2$    |    | 0 - $U_{LN}$   |
| Mains voltage (50/60Hz)   | $U_{LN}$ | V  | 380 (-15%) - 480 (+10%)  |
| At 150% overload  | $I_e$    | A  | 3.3  |
| <b>assigned motor rating P</b>                                    |          |    |  |
| Note  |          |    | at 400 V, 50 Hz  |
| 150 % Overload  | P        | kW | 1.1  |
| Note  |          |    | at 480 V, 60 Hz  |
| 150 % Overload  | P        | HP | 1.5  |
| Note  |          |    | for normal internally and externally ventilated 4 pole, three-phase asynchronous motors with $1500 \text{ rpm}^{-1}$ at 50 Hz or $1800 \text{ min}^{-1}$ at 60 Hz  |
| Description   |          |    | integrated PTC thermistor monitoring and Thermoclick with safe isolation<br>Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation<br>optional: 4 sensor inputs with M12-Y adapter for switchover to creep speed<br>Connection of supply voltage via adapter cable on round or flexible busbar junction<br>Diagnostics and reset on device and via AS-Interface<br>with AUTO - OFF/RESET - HAND key switches<br>3 fixed speeds and 1 potentiometer speed<br>can be switched over from U/f to (vector) speed control<br>with selector switch REV - OFF - FWD<br>optional: Faster stop if external 24 V fails |
| Control voltage external brake (50/60 Hz)                         |          | V  | 230/277 V AC   |
| Interface/field bus (built-in)                                    |          |    | AS-Interface®  |
| AS-Interface profile cable  |          |    | S-7.4 for 31 modules   |
| Repair switch   |          |    | with manual override switch  |
| <b>Instructions</b> for actuation of motors with mechanical brake |          |    |  |

## Technical data

### General

|                                    |           |    |   |
|------------------------------------|-----------|----|---|
| Standards                          |           |    | IEC/EN 61800-5-1<br>UL 61800-5-1<br>Guideline 2011/65/EU (RoHS)<br>CE approval<br>UL approval |
| Climatic proofing                  | $\rho_w$  | %  | < 95%, non-condensing<br>IEC/EN 50178   |
| Ambient temperature                |           |    |   |
| Operating ambient temperature min. |           | °C | 0   |
| Operating ambient temperature max. |           | °C | + 40  |
|                                    |           |    | 0 - +55 (with fan RASP-FAN-1)   |
| Storage                            | $\theta$  | °C | -30 - +70   |
| Overvoltage category               |           |    | III   |
| Rated impulse withstand voltage    | $U_{imp}$ | kV | 2   |
| Radio interference level           |           |    |   |
| Environment (EMC)                  |           |    | 2. Environment, Class C3  |
| maximum motor cable length         | l         | m  | 10  |
| Mechanical shock resistance        |           | g  | 1000 shocks per shaft, semi-sinusoidal 15 g/11 ms<br>IEC/EN 60068-2-27                        |

|                      |  |   |  |
|----------------------|--|---|--|
| Vibration            |  |   | Oscillation frequency: 10 - 150 Hz<br>Amplitude 0.15 mm: 6 Hz<br>Amplitude transition frequency on acceleration: 57 Hz<br>IEC/EN 60068-2-6 |
| Mounting position    |  |   | Vertical   |
| Altitude             |  | m | 0 - 1000 m above sea level<br>above 1000 m with 1 % performance reduction per 100 m<br>max. 2000 m   |
| Degree of Protection |  |   | IP65<br>NEMA12   |

## Main circuit

|  |            |     |   |
|--|------------|-----|---|
| Supply   |            |     |   |
| Rated operational voltage                              | $U_e$      |     | 400 V AC, 3-phase<br>480 V AC, 3-phase  |
| Mains voltage (50/60Hz)                                | $U_{LN}$   | V   | 380 (-15%) - 480 (+10%)   |
| Input current (150% overload)                          | $I_{LN}$   | A   | 4   |
| System configuration                                   |            |     | AC voltage<br>Center-point earthed star network (TN-S network)<br>Phase-earthed AC supply systems are not permitted.  |
| Supply frequency                                       | $f_{LN}$   | Hz  | 50/60   |
| Frequency range  | $f_{LN}$   | Hz  | 47 - 66 Hz ( $\pm 0\%$ )  |
| Mains switch-on frequency                              |            |     | Maximum of one time every 60 seconds  |
| Mains current distortion                               | THD        | %   | > 120   |
| Rated conditional short-circuit current                | $I_q$      | kA  | < 5   |
| Short-circuit protection for output circuits, external |            |     | Type 1 coordination via the power bus' feeder unit  |
| Power section  |            |     |   |
| Function   |            |     | Variable frequency drive with internal DC link and IGBT inverter  |
| On-delay   | $t_{ON}$   | ms  | 30 - 50   |
| Off-delay  | $t_{OFF}$  | ms  | 15 - 35   |
| Overload current (150% overload)                       | $I_L$      | A   | 5   |
| Note regarding overload current                        |            |     | at 40 °C  |
| Note about max. starting current                       |            |     | for 2 seconds<br>at 40 °C   |
| Output voltage with $V_e$                              | $U_2$      |     | 0 - $U_{LN}$  |
| Output Frequency                                       | $f_2$      | Hz  | 0 - 50/60 (max. 320)  |
| Switching frequency                                    | $f_{PWM}$  | kHz | 6<br>adjustable 1.5 - 16  |
| Operation Mode   |            |     | linear, parameterizable   |
| Frequency resolution (setpoint value)                  | $\Delta f$ | Hz  | 0.01  |
| Rated operational current                              |            |     |   |
| At 150% overload                                       | $I_e$      | A   | 3.3   |
| Note   |            |     | Rated operational current at an operating frequency of 6 kHz and an ambient air temperature of +40 °C   |
| Motor current limit                                    | $I$        | A   | 0.66 - 6.6<br>adjustable  |
| Efficiency   | $\eta$     | %   | 0.95  |
| Maximum leakage current to ground (PE) without motor   | $I_{PE}$   | mA  | 3.5   |
| Fan  |            |     | internal, temperature controlled<br>optional RASP-FAN-S1 on heat sink, temperature-controlled   |
| Fitted with  |            |     | with manual override switch<br>without fan<br>without braking resistance  |
| Motor feeder   |            |     |   |
| Note   |            |     | for normal internally and externally ventilated 4 pole, three-phase asynchronous motors with 1500 rpm <sup>-1</sup> at 50 Hz or 1800 min <sup>-1</sup> at 60 Hz |
| Note   |            |     | at 400 V, 50 Hz   |
| 150 % Overload   | P          | kW  | 1.1   |
| Note   |            |     | at 480 V, 60 Hz   |
| 150 % Overload   | P          | HP  | 1.5   |
| Actuator for external motor brake                      |            |     |   |
| Braking voltage  | U          | V   | 230/277 V AC -15% / +10%  |
| Braking current  | I          | A   | ≤ 0.6 A   |

|                  |   |                  |                       |
|------------------|---|------------------|-----------------------|
| Braking function |   |                  | (max. 6 A for 120 ms) |
| DC braking       | % | I/I <sub>e</sub> | ≤ 100, adjustable     |

### Control section

|                                |                |   |   |
|--------------------------------|----------------|---|---|
| External control voltage       | U <sub>c</sub> | V | 24 V DC - 15 % / + 20 % via AS-Interface® plug  |
| Interface/field bus (built-in) |                |   | AS-Interface®   |
| AS-Interface®                  |                |   | max. total power consumption from AS-Interface® power supply unit (30 V): 250 mA<br>Specification: S-7.4<br>Number of slave addresses: 31 |

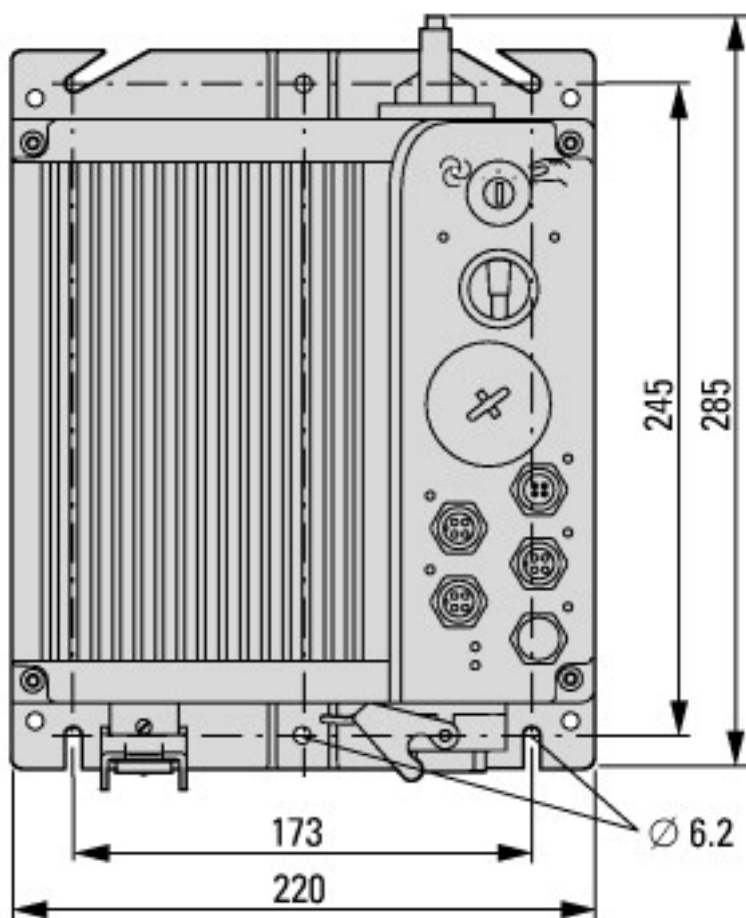
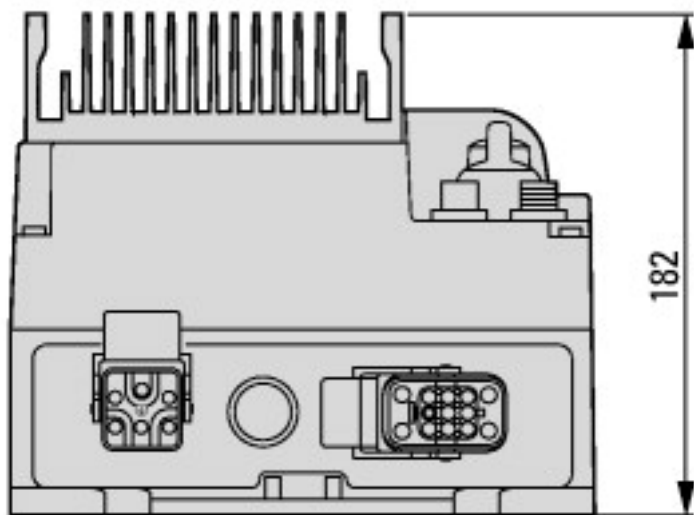
### Design verification as per IEC/EN 61439

|  |  |    |    |
|--|--|----|----|
| Technical data for design verification |  |    |    |
| Operating ambient temperature min.     |  | °C | 0  |
| Operating ambient temperature max.     |  | °C | 40 |

### Technical data ETIM 7.0

|  |  |    |                           |
|--|--|----|---------------------------|
| Devices for distribution board-/surface mounting (EG000062) / Speed controller (EC000256)  |  |    |                           |
| Electric engineering, automation, process control engineering / Electrical installation, device / Modular serial built-in device for electrical circuit distributors / Speed controller (ec1@ss10.0.1-27-14-23-20 [ACN359011]) |  |    |                           |
| Mounting method  |  |    | Surface mounted (plaster) |
| Colour   |  |    | Grey                      |
| RAL-number   |  |    | 0                         |
| Nominal current  |  | A  | 3.3                       |
| Output voltage   |  | V  | 0 - 400                   |
| Number of phases   |  |    | 3                         |
| Power control step less  |  |    | Yes                       |
| Number of steps  |  |    | 0                         |
| Basic element without cover  |  |    | Yes                       |
| Method of operation  |  |    | Key                       |
| Illumination   |  |    | None                      |
| Switching contact  |  |    | No                        |
| With temperature sensor  |  |    | Yes                       |
| Height   |  | mm | 270                       |
| Width  |  | mm | 220                       |
| Depth  |  | mm | 195                       |
| Degree of protection (IP)  |  |    | IP65                      |

## Dimensions



## Assets (links)

### Declaration of CE Conformity

00002337

### Instruction Leaflets

IL03406020Z2018\_05

### Manuals

MN03406003Z\_EN (English)

## Additional product information (links)

### IL03406020Z Rapid Link: Speed Control Unit

IL03406020Z Rapid Link: Speed Control Unit [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03406020Z2018\\_05.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03406020Z2018_05.pdf)

### MN03406003Z Rapid Link 4.0

MN03406003Z Rapid Link 4.0 - Deutsch [ftp://ftp.moeller.net/DOCUMENTATION/AWB\\_MANUALS/MN03406003Z\\_DE.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03406003Z_DE.pdf)

|   |   |
|---|---|
| MN03406003Z Rapid Link 4.0 - English  | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03406003Z_EN.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03406003Z_EN.pdf</a>   |
| MN03406003Z Rapid Link 4.0 - français   | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03406003Z_FR.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03406003Z_FR.pdf</a>   |
| CA04020001Z-EN Product Range Catalog:<br>Efficient Engineering for Starting and<br>Controlling Motors | <a href="http://www.eaton.eu/DE/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_1095238.pdf">http://www.eaton.eu/DE/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_1095238.pdf</a> |