



Reversing starter, 6.6 A, 230/277 V AC, AS-Interface®, S-7.4 for 31 modules, with manual override switch



Part no. **RAMO-W02A1S-C32RS1**
 Catalog No. **150161**
 Alternate Catalog No. **RAMO-W02A1S-C32RS1**

Delivery program

| | | | |
|---|----------|----|--|
| | | | This item is only available until 06/30/2020, after which it will be replaced with the following item: Y7-198532, RAM05-W202A31-512RS1 |
| Product range | | | Motor starter |
| Basic function | | | Reversing starter |
| Rated operational voltage | U_e | | 400 V AC, 3-phase 480 V AC, 3-phase |
| Output voltage with V_e | U_2 | | = U_{LN} |
| Mains voltage (50/60Hz) | U_{LN} | V | 380 (-15%) - 480 (+10%) |
| At 150% overload | I_e | A | 6.6 |
| assigned motor rating P | | | |
| Note | | | at 400 V, 50 Hz |
| 150 % Overload | P | kW | 0,09 - 3 |
| Note | | | at 480 V, 60 Hz |
| 150 % Overload | P | HP | 0,125 - 3 |
| Note | | | for normal internally and externally ventilated 4 pole, three-phase asynchronous motors with 1500 rpm^{-1} at 50 Hz or 1800 min^{-1} at 60 Hz |
| Description | | | Integrated thermistor monitoring PTC and thermo-click Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation Connections pluggable in power section Connection of supply voltage via adapter cable on round or flexible busbar junction Diagnostics and reset on device and via AS-Interface with AUTO - OFF/RESET - HAND key switches With electronic motor protection for allocated motor power from 0.09 – 3.0 kW (400 V)/0.125 – 3.0 HP (480 V) |
| 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 |
| Instructions for actuation of motors with mechanical brake | | | |

Technical data

General

| | | | |
|------------------------------------|-----------|----|---|
| Standards | | | IEC/EN 60947-4-2 UL 60947-4-2 Guideline 2011/65/EU (RoHS) CE approval UL approval CCC approval |
| Climatic proofing | ρ_w | % | < 95%, non-condensing IEC/EN 50178 |
| Ambient temperature | | | |
| Operating ambient temperature min. | | °C | -10 |
| Operating ambient temperature max. | | °C | +55 |
| Storage | θ | °C | -30 - +70 |
| Overvoltage category | | | III |
| Rated impulse withstand voltage | U_{imp} | kV | 4 |
| Radio interference level | | | |
| Environment (EMC) | | | Device class A |
| maximum motor cable length | l | m | 10 |
| Mechanical shock resistance | | g | 1000 shocks per shaft, semi-sinusoidal 15 g/11 ms IEC/EN 60068-2-27 |

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

Main circuit

| | | | |
|--|------------|----|---|
| Supply | | | |
| Rated operational voltage | U_e | | 400 V AC, 3-phase 480 V AC, 3-phase |
| Mains voltage (50/60Hz) | U_{LN} | V | 380 (-15%) - 480 (+10%) |
| Input current (150% overload) | I_{LN} | A | 6.6 |
| System configuration | | | AC voltage Center-point earthed star network (TN-S network) Phase-earthed AC supply systems are not permitted. |
| Supply frequency | f_{LN} | Hz | 50/60 |
| Frequency range | f_{LN} | Hz | 47 - 63 Hz ($\pm 0\%$) |
| Mains switch-on frequency | | | Maximum of one time every 60 seconds |
| Rated conditional short-circuit current | I_q | kA | < 10 |
| Short-circuit protection for output circuits, external | | | Type 1 coordination via the power bus' feeder unit |
| Power section | | | |
| Function | | | Reversing starter with relays, thyristors and bypass contacts, 2-phase controlled |
| On-delay | t_{0N} | ms | 20 - 35 |
| Off-delay | t_{0FF} | ms | 20 - 35 |
| Lifespan, mechanical | Operations | | AC3: > 10.000.000 |
| Lifespan, electrical | Operations | | AC3: > 10.000.000 |
| Overload cycle | | | AC-53a |
| Output voltage with V_e | U_2 | | = U_{LN} |
| Output Frequency | f_2 | Hz | = f_{LN} |
| Rated operational current | | | |
| At 150% overload | I_e | A | 6.6 |
| Motor current limit | I | A | 0.3 - 6.6 adjustable |
| Fitted with | | | with manual override switch |
| Motor feeder | | | |
| Note | | | for normal internally and externally ventilated 4 pole, three-phase asynchronous motors with 1500 rpm^{-1} at 50 Hz or 1800 min^{-1} at 60 Hz |
| Note | | | at 400 V, 50 Hz |
| Note | | | at 480 V, 60 Hz |
| Actuator for external motor brake | | | |
| Braking voltage | U | V | 230/277 V AC -15% / +10% |
| Braking current | I | A | $\leq 0.6 \text{ A}$ (max. 6 A for 120 ms) |

Control section

| | | | |
|--------------------------------|-------|---|---|
| External control voltage | U_c | 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 Specification: S-7.4 Number of slave addresses: 31 |

Design verification as per IEC/EN 61439

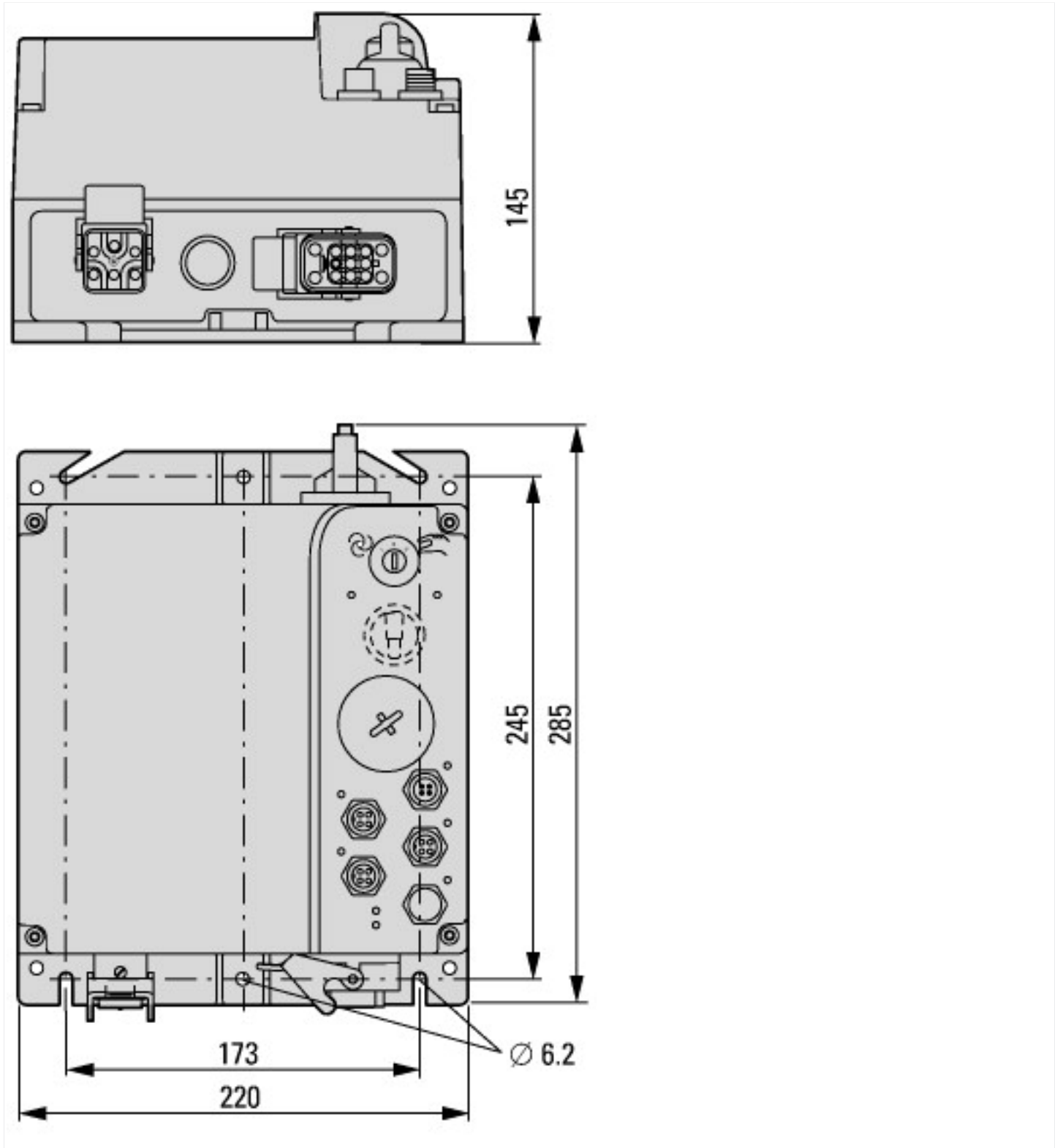
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|--|--|----|-----|
| Technical data for design verification | | | |
| Operating ambient temperature min. | | °C | -10 |
| Operating ambient temperature max. | | °C | 55 |

Technical data ETIM 7.0

| Low-voltage industrial components (EG000017) / Motor starter/Motor starter combination (EC001037) | | |
|--|----|---------------|
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Load breakout, motor breakout / Motor starter combination (ecl@ss10.0.1-27-37-09-05 [AJZ718013]) | | |
| Kind of motor starter | | Repair switch |
| With short-circuit release | | Yes |
| Rated control supply voltage U_s at AC 50HZ | V | 0 - 0 |
| Rated control supply voltage U_s at AC 60HZ | V | 0 - 0 |
| Rated control supply voltage U_s at DC | V | 0 - 0 |
| Voltage type for actuating | | AC |
| Rated operation power at AC-3, 230 V, 3-phase | kW | 0 |
| Rated operation power at AC-3, 400 V | kW | 3 |
| Rated power, 460 V, 60 Hz, 3-phase | kW | 2.238 |
| Rated power, 575 V, 60 Hz, 3-phase | kW | 0 |
| Rated operation current I_e | A | 6.6 |
| Rated operation current at AC-3, 400 V | A | 6.6 |
| Overload release current setting | A | 0.3 - 6.6 |
| Rated conditional short-circuit current, type 1, 480 Y/277 V | A | 10000 |
| Rated conditional short-circuit current, type 1, 600 Y/347 V | A | 0 |
| Rated conditional short-circuit current, type 2, 230 V | A | 0 |
| Rated conditional short-circuit current, type 2, 400 V | A | 0 |
| Number of auxiliary contacts as normally open contact | | 0 |
| Number of auxiliary contacts as normally closed contact | | 0 |
| Ambient temperature, upper operating limit | °C | 55 |
| Temperature compensated overload protection | | Yes |
| Release class | | CLASS 10 |
| Type of electrical connection of main circuit | | Other |
| Type of electrical connection for auxiliary- and control current circuit | | Other |
| Rail mounting possible | | No |
| With transformer | | No |
| Number of command positions | | 2 |
| Suitable for emergency stop | | No |
| Coordination class according to IEC 60947-4-3 | | Class 1 |
| Number of indicator lights | | 0 |
| External reset possible | | Yes |
| With fuse | | No |
| Degree of protection (IP) | | IP65 |
| Degree of protection (NEMA) | | 12 |
| 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 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 other bus systems | | No |
| Width | mm | 220 |
| Height | mm | 285 |
| Depth | mm | 145 |

Dimensions



Assets (links)

Declaration of CE Conformity

00002804

Instruction Leaflets

IL03406019Z2018_04

Manuals

MN03406003Z_EN (English)

Additional product information (links)

| | |
|---|---|
| IL03406019Z Rapid Link: Motor Control Unit | |
| IL03406019Z Rapid Link: Motor Control Unit | ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03406019Z2018_04.pdf |
| MN03406003Z Rapid Link 4.0 | |
| MN03406003Z Rapid Link 4.0 - Deutsch | ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03406003Z_DE.pdf |
| MN03406003Z Rapid Link 4.0 - English | ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03406003Z_EN.pdf |
| MN03406003Z Rapid Link 4.0 - français | ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03406003Z_FR.pdf |
| CA04020001Z-EN Product Range Catalog: Efficient Engineering for Starting and Controlling Motors | http://www.eaton.eu/DE/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_1095238.pdf |