# DATASHEET - RAMO-D00AI1S-C32RS1

**DOL starter, 6.6 A, AS-Interface®, S-7.4 for 31 modules, with manual override switch**

Powering Business Worldwide™

| | |
|---|---|
| **Part no.** | **RAMO-D00AI1S-C32RS1** |
| **Catalog No.** | **150158** |
| **Alternate Catalog No.** | **RAMO-D00AI1S-C32RS1** |

## Delivery program

| | | | |
|---|---|---|---|
| | | | This item is only available until 06/30/2020, after which it will be replaced with the following item: Y7-198518, RAMO5-D200A31-512RS1 |
| Product range | | | Motor starter |
| Basic function | | | DOL starters |
| Rated operational voltage | $U_e$ | | 400 V AC, 3-phase<br>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<br>Two sensor inputs through M12 sockets (max. 150 mA) for quick stop and interlocked manual operation<br>Connections pluggable in power section<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>With electronic motor protection for allocated motor power from 0.09 – 3.0 kW (400 V)/0.125 – 3.0 HP (480 V) |
| Interface/field bus (built-in) | | | AS-Interface® |
| AS-Interface profile cable | | | S-7.4 for 31 modules |
| Repair switch | | | with manual override switch |

## Technical data

### General

| | | | |
|---|---|---|---|
| Standards | | | IEC/EN 60947-4-2<br>UL 60947-4-2<br>Guideline 2011/65/EU (RoHS)<br>CE approval<br>UL approval<br>CCC approval |
| Climatic proofing | $\rho_w$ | % | < 95%, non-condensing<br>IEC/EN 50178 |
| Ambient temperature | | | |
| Operating ambient temperature min. | | °C | -10 |
| Operating ambient temperature max. | | °C | + 55 |
| Storage | $\vartheta$ | °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<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 |

| | | | |
|---|---|---|---|
| | | | 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 | 6.6 |
| 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 - 63 Hz (± 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 | | | DOL starter with thyristors and bypass contacts, 2-phase |
| On-delay | $t_{ON}$ | ms | 20 - 35 |
| Off-delay | $t_{OFF}$ | 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<br>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 |

## 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<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 | -10 |
| Operating ambient temperature max. | | °C | 55 |

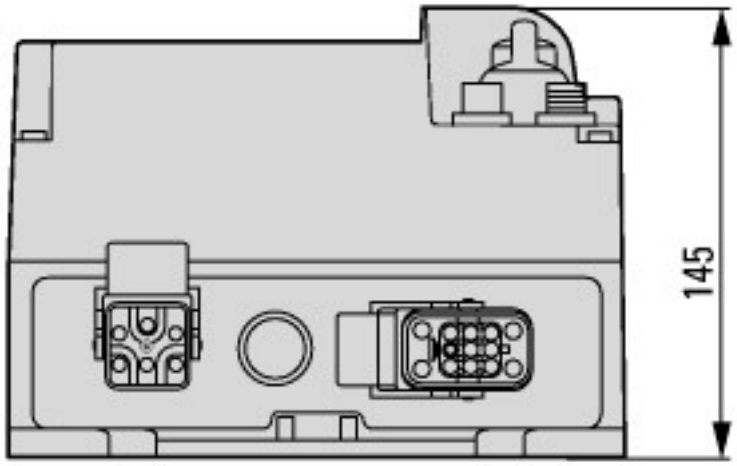
# Technical data ETIM 7.0

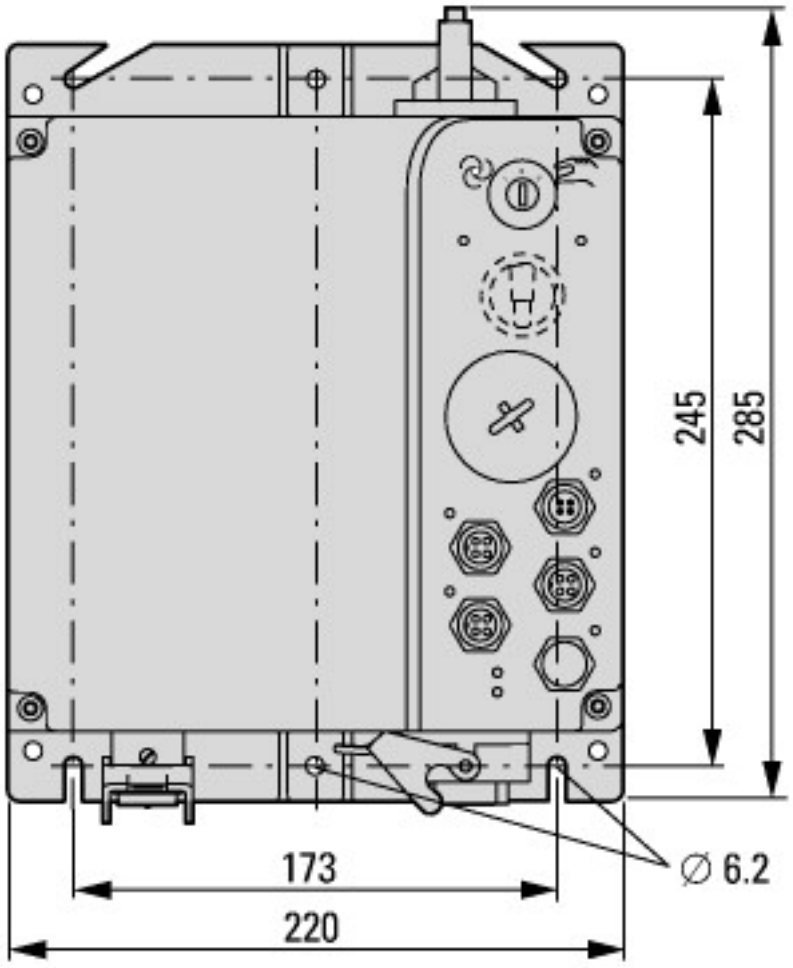
| | | | |
|---|---|---|---|
| Low-voltage industrial components (EG000017) / Motor starter/Motor starter combination (EC001037) | | | |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Load breakout, motor breakout / Motor starter combination (ecl@ss10.0.1-27-37-09-05 [AJZ718013]) | | | |
| Kind of motor starter | | | Repair switch |
| With short-circuit release | | | Yes |

| | | |
|---|---|---|
| Rated control supply voltage Us at AC 50HZ | V | 0 - 0 |
| Rated control supply voltage Us at AC 60HZ | V | 0 - 0 |
| Rated control supply voltage Us 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 Ie | 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 | | 1 |
| 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 |