

Product data sheet

Specifications



Motion controller, Modicon M262, 5ns/instruction, 4 axes, Ethernet, Sercos

TM262M15MESS8T

Main

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| Range of product | Logic/motion controller - Modicon M262 |
| Product or component type | Motion controller |
| [Us] rated supply voltage | 24 V DC - 15...20 % |
| Discrete I/O number | 8 |
| Upstream connectivity | IIoT-ready machine to cloud Connected machine to plant |

Complementary

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| Supply voltage limits | 20.4...28.8 V DC |
| PLC Power Consumption | 82 W |
| Inrush current | 40 A |
| Number of overvoltage protection | With |
| Discrete input number | 4, discrete input fast input conforming to IEC 61131-2 Type 1 |
| Discrete input voltage | 24 V |
| Discrete input voltage type | DC |
| Discrete input logic | Sink |
| Voltage state 1 guaranteed | ≥ 15 V for DC |
| Voltage state 0 guaranteed | ≤ 5 V for DC |
| Discrete input current | 7.5 mA for fast input |
| Input impedance | 2.81 kOhm for input |
| Response time | ≤ 1 μ s turn-on, I0...I3 terminal(s) for fast input ≤ 1 μ s turn-off, I0...I3 terminal(s) for fast input ≤ 1 μ s turn-on, Q0...Q3 terminal(s) for fast output ≤ 1 μ s turn-off, Q0...Q3 terminal(s) for fast output |
| Configurable filtering time | 0.001 ms for fast input 0.002 ms for fast input 0.005 ms for fast input 0.01 ms for fast input 0.05 ms for fast input 0.1 ms for fast input 0.5 ms for fast input 1 ms for fast input 4 ms for fast input 12 ms for fast input |
| Discrete output number | 4 transistor fast output |
| Discrete output voltage | 24 V DC |

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| Discrete output current | 0.5 A for fast output (Q0...Q3) |
| Discrete output type | Transistor |
| Discrete output logic | Source |
| Output voltage limits | 30 V DC |
| Maximum current per output common | 0.5 A with Q0...Q3 for fast output |
| Maximum output frequency | 300 kHz |
| Accuracy | +/- 0.1 % at 0.02...0.1 kHz for fast output +/- 1 % at 0.1...1 kHz for fast output |
| Maximum leakage current | 10 µA for output |
| Maximum tungsten load | <1.5 W |
| Protection type | Short-circuit and overload protection with automatic reset Reverse polarity protection Short-circuit protection |
| Reset time | 200 ms automatic reset fast output |
| Maximum number of I/O expansion module | 7TM3 IO module (local I/O-Architecture) 7TM3 IO module (remote I/O-Architecture) 64TM3, TM5 or TM7 IO island (distributed I/O-Architecture) |
| Execution time for 1 KInstruction | 0.005 ms |
| Memory capacity | 32 MB for program RAM 32 MB for OS/website RAM 192 MB for system memory RAM |
| Data backed up | 1 GB built-in flash memory for backup of user programs |
| Data storage equipment | <= 32 GB SDHC card (optional) |
| Backup time | 1000 h at 25 °C |
| Application structure | 8 event tasks 4 cyclic master tasks 3 cyclic master tasks + 1 freewheeling task 8 external event tasks |
| Realtime clock | With |
| Clock drift | <= 10 s/month at 25 °C |
| Cycle time | 0.5 ms |
| Positioning functions | Libraries axes coordinated function Libraries axes synchronous function Sercos 3 motion bus function |
| Integrated connection type | Ethernet/Sercos 1 with RJ45 connector and 10/100BASE-T interface Ethernet 2 with 2 RJ45 connector and 100/1000BASE-T interface Serial link with RJ45 connector and RS232/RS485 interface 1 encoder with female SUB-D 15 connector and RS422/SSI interface Smart Communication Bus TM3 IO bus USB type mini B |
| Transmission rate | 115 kbit/s for bus length of 15 m for RS485 115 kbit/s for bus length of 3 m for RS232 480 Mbit/s for bus length of 3 m for USB 10/100 Mbit/s for Ethernet1 10/100/1000 Mbit/s for Ethernet2 |
| Communication port protocol | EtherNet/IP adapter EtherNet/IP scanner Modbus TCP client/server Modbus TCP IO scanner Modbus TCP NVL Ethernet RSTP Modbus SL client/server Modbus SL IO scanner Modbus SL modem management Machine Expert ASCII manager ASCII modem management Sercos III master |
| Maximum number of connected devices | EtherNet/IP: 64 Modbus TCP: 64 |

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| Communication service | <p>MQTTs OPC UA server (Encrypt) HTTPs Methods (API) Web server Web visu TLS 1.2 TLS 1.3 SNTP NTP client/server FTP client/server FTPs server SQL client (remote access) DHCP client DHCP server DNS client POP3s client SMTP client SNMP client/server</p> |
| Local signalling | <p>1 LED (green/red) for PWR 1 LED (green/red) for RUN 1 LED (green/red) for ERROR (fault) 1 LED (green/red) for stop forced 1 LED (green/red) for I/O error (I/O) 1 LED (green/orange) for SD card activity 1 LED (green/orange) for SL activity 1 LED (green/red) for ETH1 state 1 LED (green/red) for ETH2 state 1 LED (green/red) for EIP MS 1 LED (green/red) for EIP NS 1 LED (green/red) for Sercos</p> |
| Electrical connection | <p>removable spring terminal blockfor inputs and outputs removable spring terminal blockfor connecting the 24 V DC power supply</p> |
| Product compatibility | External encoder 5/24 V DC no encoder power supply |
| Maximum cable distance between devices | <p>Shielded cable: <3 m for fast input Shielded cable: <3 m for fast output Unshielded cable: <50 m for input Unshielded cable: <50 m for output Shielded cable: <30 m for RS485 link Shielded cable: <15 m for RS232</p> |
| Insulation | <p>Between fast input and internal logic at 550 V AC Non-insulated between inputs Between fast output and internal logic at 550 V AC Non-insulated between outputs Between input and output at 550 V AC Between supply and internal logic at 550 V AC Non-insulated between supply and ground</p> |
| Encoder type | Incremental encoder |
| Surge withstand | <p>1 kV power lines (DC) common mode conforming to EN/IEC 61000-4-5 1 kV shielded cable common mode conforming to EN/IEC 61000-4-5 0.5 kV relay output differential mode conforming to EN/IEC 61000-4-5 1 kV input common mode conforming to EN/IEC 61000-4-5 1 kV transistor output common mode conforming to EN/IEC 61000-4-5</p> |
| Mounting support | <p>Top hat type TH35-15 rail conforming to IEC 60715 Top hat type TH35-7.5 rail conforming to IEC 60715 plate or panel with fixing kit</p> |
| Height | 100 mm |
| Depth | 90 mm |
| Width | 125 mm |
| Net weight | 0.67 kg |

Environment

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| Standards | <p>UL 61010-1 UL 61010-2-201 CSA C22.2 No 61010-1 CSA C22.2 No 61010-2-201 CSA C22.2 No 213 ANSI/ISA 12-12-01 EN 61131-2</p> |
| Product certifications | <p>CE cULus cULus HazLoc Class I Division 2 CSA 22-2 No 213 RCM EAC Achilles</p> |

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| Resistance to electrostatic discharge | 4 kV on contact conforming to EN/IEC 61000-4-2 8 kV on air conforming to EN/IEC 61000-4-2 |
| Resistance to electromagnetic fields | 10 V/m 80 MHz...1 GHz conforming to EN/IEC 61000-4-3 3 V/m 1.4 GHz...2 GHz conforming to EN/IEC 61000-4-3 1 V/m 2 GHz...3 GHz conforming to EN/IEC 61000-4-3 |
| Resistance to fast transients | 2 kV (power lines) conforming to EN/IEC 61000-4-4 1 kV (Ethernet line) conforming to EN/IEC 61000-4-4 1 kV (serial link) conforming to EN/IEC 61000-4-4 1 kV (input) conforming to EN/IEC 61000-4-4 1 kV (transistor output) conforming to EN/IEC 61000-4-4 |
| Resistance to conducted disturbances | 10 V 0.15...80 MHz conforming to EN/IEC 61000-4-4 3 V 0.1...80 MHz 10 V spot frequency (2, 3, 4, 6.2, 8.2, 12.6, 16.5, 18.8, 22, 25 MHz) |
| Electromagnetic emission | Conducted emissions - test level: 120...69 dB μ V/m QP (power lines) at 10...150 kHz conforming to EN/IEC 55011 Conducted emissions - test level: 63 dB μ V/m QP (power lines) at 1.5...30 MHz conforming to EN/IEC 55011 Radiated emissions - test level: 40 dB μ V/m at 30...230 kHz conforming to EN/IEC 55011 Conducted emissions - test level: 79...63 dB μ V/m QP (power lines) at 150...1500 kHz conforming to EN/IEC 55011 Radiated emissions at 230...1000 MHz conforming to EN/IEC 55011 |
| Immunity to microbreaks | 0.01 ms |
| Ambient air temperature for operation | -20...60 °C (horizontal installation) -20...50 °C (vertical installation) -20...45 °C (flat mounting) |
| Ambient air temperature for storage | -40...85 °C |
| Relative humidity | 10...95 %, without condensation (in operation) 10...95 %, without condensation (in storage) |
| IP degree of protection | IP20 |
| Pollution degree | 2 |
| Operating altitude | 0...2000 m |
| Storage altitude | 0...3000 m |
| Vibration resistance | 3.5 mm at 2...8.4 Hz on symmetrical rail 1 gn at 8.4...200 Hz on symmetrical rail 3.5 mm at 2...8.4 Hz on panel mounting 1 gn at 8.4...200 Hz on panel mounting |
| Shock resistance | 15 gn for 11 ms |

Packing Units

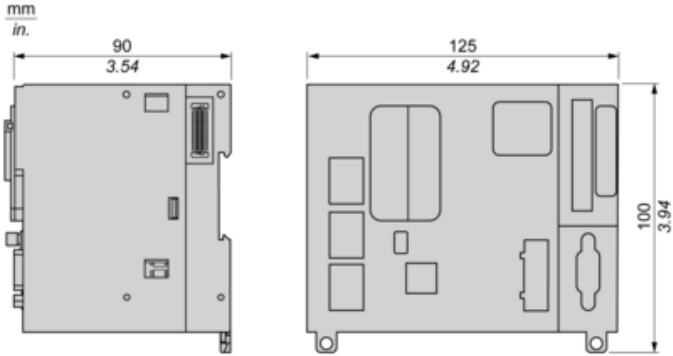
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|-------------------------------------|---------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Weight | 850 g |
| Package 1 Height | 13.8 cm |
| Package 1 width | 18.3 cm |
| Package 1 Length | 13.1 cm |

Offer Sustainability

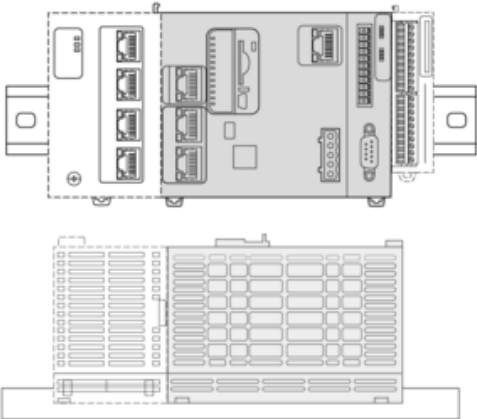
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|-----------------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS declaration |
| Environmental Disclosure | Product Environmental Profile |

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| Circularity Profile | End of Life Information |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| PVC free | Yes |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |

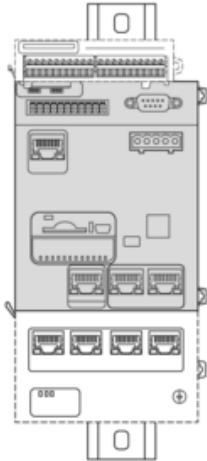
Side and Front Views



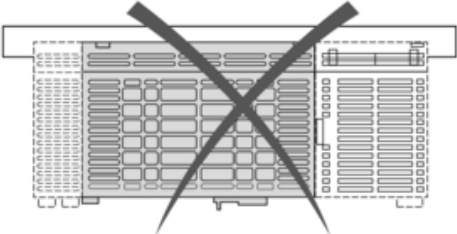
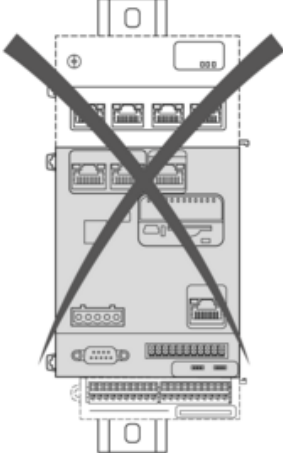
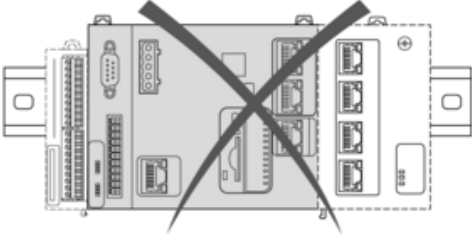
Correct Mounting Position



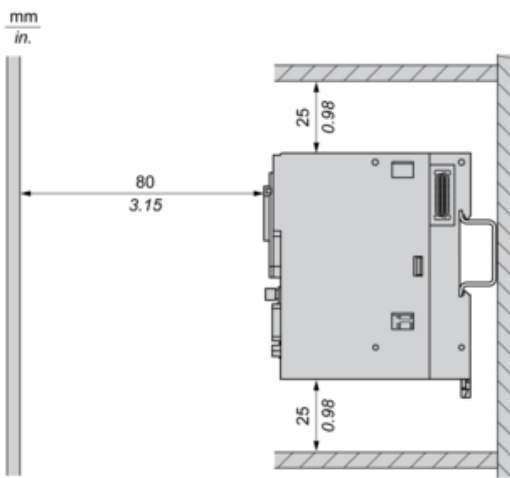
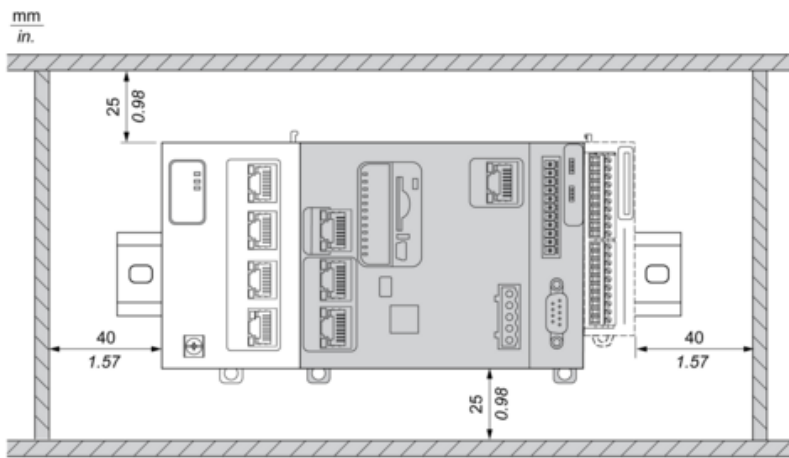
Acceptable Mounting Position



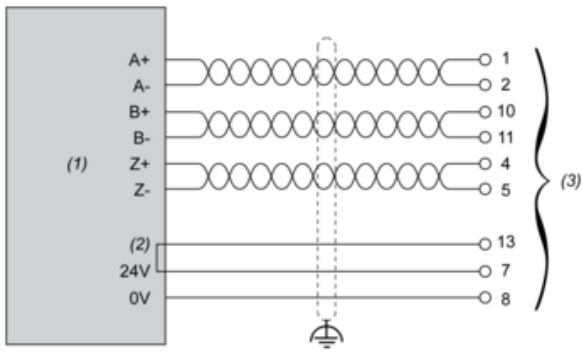
Incorrect Mounting Positions



Minimum Clearances

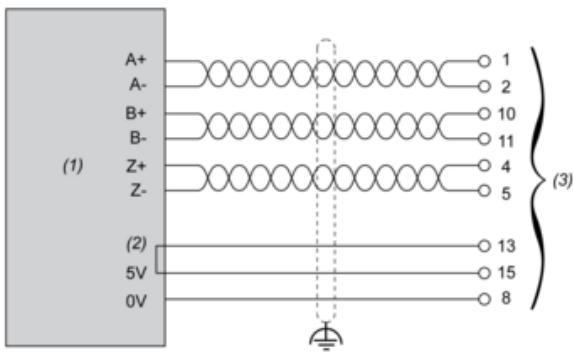


Encoder RS422 / 24 VDC



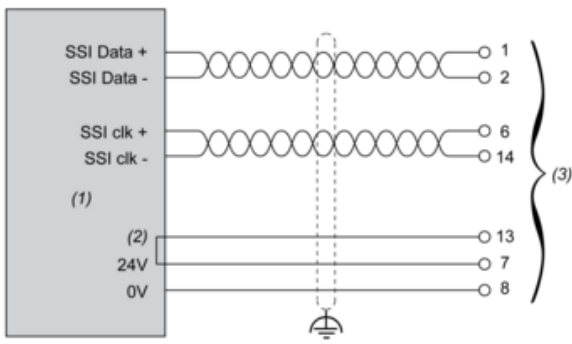
- (1) Encoder
- (2) Return Option
- (3) Encoder Sub-D

Encoder RS422 / 5 VDC or Push Pull



- (1) Encoder
- (2) Return Option
- (3) Encoder Sub-D

Encoder SSI



- (1) Encoder
- (2) Return Option
- (3) Encoder Sub-D