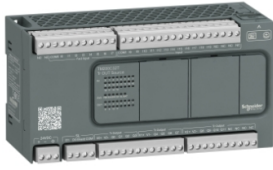


Product datasheet

Specifications

controller M200, 32 IO, transistor Source



TM200C32T

Main

| | |
|-----------------------------|---|
| Range of product | Easy Modicon M200 |
| Product or component type | Logic controller |
| [Us] rated supply voltage | 24 V DC |
| Discrete I/O number | 32 |
| Discrete input number | I2...I5: 4 fast input I0, I1, I6, I7: 4 high speed input I8...I19: 12 regular input |
| Discrete output number | Q0...Q1: 2 fast output (PLS/PWM/PTO mode) Q2...Q11: 10 transistor output |
| Discrete input voltage | 24 V |
| Discrete input voltage type | DC |
| Discrete input current | 7 mA for input/fast input 9 mA for high speed input |
| Discrete input logic | Sink or source (positive/negative) type 1 conforming to IEC 61131-2 |
| Discrete output voltage | 24 V DC |
| Discrete output current | 50 mA for pulse output 500 mA for output |
| Discrete output type | Transistor |
| Discrete output logic | Positive logic (source) |
| Power consumption in W | 16...18 W at 24 V DC (with max I/O) |

Complementary

| | |
|--|---|
| Maximum number of I/O expansion module | 4 with 64 discrete output(s) for relay output 4 with 144 discrete output(s) for transistor output |
| Supply voltage limits | 20.4...28.8 V |
| Inrush current | 35 A |
| Voltage state 1 guaranteed | ≥ 15 V for input |
| Voltage state 0 guaranteed | ≤ 5 V for input |
| Input impedance | 3.3 kOhm for discrete input |
| Response time | 5 μ s turn-on, Q0...Q1 terminal(s) for fast output (PLS/PWM/PTO mode) 5 μ s turn-off, Q0...Q1 terminal(s) for fast output (PLS/PWM/PTO mode) 1 ms turn-on, Q2...Q11 terminal(s) for output 1 ms turn-off, Q2...Q11 terminal(s) for output 5 μ s turn-on, I0, I1, I6, I7 terminal(s) for high speed input 5 μ s turn-off, I0, I1, I6, I7 terminal(s) for high speed input 35 μ s turn-on, I2...I5 terminal(s) for fast input 100 μ s turn-off, I2...I5 terminal(s) for fast input |

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| Configurable filtering time | 0 ms for input 3 ms for input 12 ms for input |
| Output voltage limits | 30 V DC |
| Maximum current per output common | 2 A at V0+,V0- 2 A at V1+,V1- 2 A at V2+,V2- |
| Output frequency | 100 kHz for fast output (PLS/PWM/PTO mode) at 24 V DC sensors |
| Maximum leakage current | 0.1 mA for transistor output |
| Maximum voltage drop | <1 V |
| Maximum tungsten load | <12 W for output and fast output |
| Protection type | Overload and short-circuit protection at 3.8 A |
| Reset time | 1 s automatic reset |
| Memory capacity | 512 byte internal flash for backup of programs |
| Data storage equipment | 32 GB micro SD card (optional) |
| Battery type | BR2032 Li-CFx (Lithium-Carbon Monofluoride), battery life: 5 year(s) |
| Backup time | 3 years at 25 °C (by interruption of power supply) |
| Execution time for 1 KInstruction | 0.3 ms for event and periodic task |
| Execution time per instruction | 0.2 µs Boolean |
| Exct time for event task | 60 µs response time |
| Clock drift | <= 90 s/month at 25 °C |
| Regulation loop | Adjustable PID regulator up to 14 simultaneous loops |
| Positioning functions | PWM/PLS 2 channel(s) at 100 kHz |
| Control signal type | Quadrature (x1, x2, x4) at 100 kHz for fast input (HSC mode) Pulse/direction at 100 kHz for fast input (HSC mode) Single phase at 100 kHz for fast input (HSC mode) CW/CCW at 100 kHz for fast input (HSC mode) |
| Counting input number | 4 fast input (HSC mode) at 100 kHz 32 bits |
| Integrated connection type | Non isolated serial link serial 1 with terminal block connector and RS485 interface Non isolated serial link serial 2 with RJ45 connector and RS232/RS485 interface Isolated serial link serial 2 with RJ45 connector and RS485 interface USB port with mini B USB 2.0 connector and mini USB interface |
| Transmission rate | 1.2...115.2 kbit/s (115.2 kbit/s by default) for bus length of 15 m for Modbus RTU and ASCII 12 Mbit/s for bus length of 3 m for USB |
| Communication port protocol | USB port: USB - SoMachine-Network Non isolated serial link: Modbus master/slave - RTU/ASCII or SoMachine-Network |
| Local signalling | 1 LED (green) for PWR 1 LED (green) for RUN 1 LED (red) for module error (ERR) 1 LED (green) for SD card access (SD) 1 LED (red) for BAT 1 LED (green) for SL1 1 LED per channel (green) for I/O state |
| Electrical connection | Mini B USB 2.0 connector for a programming terminal connector for connecting Ethernet network removable screw terminal block, 3 terminal(s) for connecting the 24 V DC power supply removable screw terminal block, 4 terminal(s) for connecting the serial link1 removable screw terminal block, 10 terminal(s) removable screw terminal block, 12 terminal(s) removable screw terminal block, 11 terminal(s) removable screw terminal block, 17 terminal(s) |

| | |
|---|---|
| Maximum cable distance between devices | Unshielded cable: <50 m for regular input Shielded cable: <10 m for fast input Unshielded cable: <10 m for output <150 m |
| Insulation | Between input and internal logic at 500 V AC/DC Between input and internal logic at 800 V AC/DC Between input groups at 500 V AC/DC Between input groups at 800 V AC/DC Between output and internal logic at 500 V AC/DC Between output and internal logic at 800 V AC/DC Between supply and internal logic at 500 V AC/DC Between supply and internal logic at 800 V AC/DC Between supply and ground at 500 V DC |
| Marking | CE |
| Mounting support | Top hat type TH35-15 rail conforming to IEC 60715 Top hat type TH35-7.5 plate or panel with fixing kit conforming to IEC 60715 |
| Height | 90 mm |
| Depth | 70 mm |
| Width | 175 mm |
| Net weight | 0.522 kg |

Environment

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|--------------------------------------|---|
| IP degree of protection | IP20 with protective cover in place |
| Product certifications | CE |
| Standards | IEC 61131-2 IEC 61010-2-201 |
| Electromagnetic compatibility | Electrostatic discharge immunity test - test level: 8 kV (air discharge) conforming to IEC 61000-4-2 Electrostatic discharge immunity test - test level: 6 kV (contact discharge) conforming to IEC 61000-4-2 Susceptibility to electromagnetic fields - test level: 10 V/m (80 MHz...3 GHz) conforming to IEC 61000-4-3 Magnetic field at power frequency - test level: 30 A/m conforming to IEC 61000-4-8 Electrical fast transient/burst immunity test - test level: 2 kV (power lines) conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test - test level: 1 kV (communication circuit) conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test - test level: 1 kV (I/O) conforming to IEC 61000-4-4 1.2/50 µs shock waves immunity test - test level: 0.5 kV differential mode (I/O) conforming to IEC 61000-4-5 1.2/50 µs shock waves immunity test - test level: 1 kV common mode (I/O) conforming to IEC 61000-4-5 1.2/50 µs shock waves immunity test - test level: 1 kV common mode (shielded cable) conforming to IEC 61000-4-5 1.2/50 µs shock waves immunity test - test level: 0.5 kV differential mode (power lines (DC)) conforming to IEC 61000-4-5 1.2/50 µs shock waves immunity test - test level: 1 kV common mode (power lines (DC)) conforming to IEC 61000-4-5 Conducted RF disturbances - test level: 10 V (0.15...80 MHz) conforming to IEC 61000-4-6 Conducted emission - test level: 79 dBµV/m QP/66 dBµV/m AV conforming to IEC 55011 Conducted emission - test level: 73 dBµV/m QP/60 dBµV/m AV conforming to IEC 55011 Radiated emission - test level: 40 dBµV/m QP class A (10 m) conforming to IEC 55011 Radiated emission - test level: 47 dBµV/m QP class A (10 m) conforming to IEC 55011 |
| Shock resistance | 15 gn for 11 ms 30 gn for 6 ms |
| Immunity to microbreaks | 2 ms |

| | |
|--|--|
| Vibration resistance | 3.5 mm at 5...8.4 Hz on symmetrical DIN rail 1 gn at 8.4...150 Hz on symmetrical DIN rail 3.5 mm at 5...8.7 Hz on panel mounting 2 gn at 8.7...150 Hz on panel mounting |
| Relative humidity | 5...95 %, without condensation (in operation) |
| Ambient air temperature for operation | 0...55 °C (horizontal installation) |
| Ambient air temperature for storage | -25...70 °C |
| Pollution degree | <= 2 |
| Operating altitude | 0...2000 m |
| Storage altitude | 0...3000 m |

Packing Units

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|-------------------------------------|----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 13.6 cm |
| Package 1 Width | 9.0 cm |
| Package 1 Length | 18.3 cm |
| Package 1 Weight | 727.5 g |
| Unit Type of Package 2 | S03 |
| Number of Units in Package 2 | 12 |
| Package 2 Height | 30 cm |
| Package 2 Width | 30 cm |
| Package 2 Length | 40 cm |
| Package 2 Weight | 9.171 kg |

Contractual warranty

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|-----------------------------|----|
| Warranty (in months) | 18 |
|-----------------------------|----|



Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



Environmental footprint

| | |
|--|---|
| Total lifecycle Carbon footprint | 1 393 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Carbon footprint of the manufacturing phase [A1 to A3] | 15 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.2 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.3 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 1 376 kg CO2 eq. |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.4 kg CO2 eq. |

Use Better



Materials and Packaging

| | |
|--|----|
| Packaging made with recycled cardboard | No |
| Packaging without single use plastic | No |

Use Longer



Lifetime extension

| | |
|--------|----|
| Repair | No |
|--------|----|

Use Again



Repack and remanufacture

| | |
|---------------------------------|---|
| End of life manual availability | End of Life Information |
| Take-back | No |