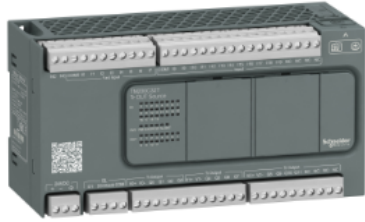


Product data sheet

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 EN/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 µs turn-off, I2...I5 terminal(s) for fast input

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 connectorfor a programming terminal connectorfor 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
Product weight	0.522 kg

Environment

IP degree of protection	IP20 with protective cover in place
Product certifications	CE EAC
Standards	EN/IEC 61131-2 EN/IEC 61010-2-201

Electromagnetic compatibility	Electrostatic discharge immunity test - test level: 8 kV (air discharge) conforming to EN/IEC 61000-4-2 Electrostatic discharge immunity test - test level: 6 kV (contact discharge) conforming to EN/IEC 61000-4-2 Susceptibility to electromagnetic fields - test level: 10 V/m (80 MHz...3 GHz) conforming to EN/IEC 61000-4-3 Magnetic field at power frequency - test level: 30 A/m conforming to EN/IEC 61000-4-8 Electrical fast transient/burst immunity test - test level: 2 kV (power lines) conforming to EN/IEC 61000-4-4 Electrical fast transient/burst immunity test - test level: 1 kV (communication circuit) conforming to EN/IEC 61000-4-4 Electrical fast transient/burst immunity test - test level: 1 kV (I/O) conforming to EN/IEC 61000-4-4 1.2/50 µs shock waves immunity test - test level: 0.5 kV differential mode (I/O) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test - test level: 1 kV common mode (I/O) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test - test level: 1 kV common mode (shielded cable) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test - test level: 0.5 kV differential mode (power lines (DC)) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test - test level: 1 kV common mode (power lines (DC)) conforming to EN/IEC 61000-4-5 Conducted RF disturbances - test level: 10 V (0.15...80 MHz) conforming to EN/IEC 61000-4-6 Conducted emission - test level: 79 dBµV/m QP/66 dBµV/m AV conforming to EN/IEC 55011 Conducted emission - test level: 73 dBµV/m QP/60 dBµV/m AV conforming to EN/IEC 55011 Radiated emission - test level: 40 dBµV/m QP class A (10 m) conforming to EN/IEC 55011 Radiated emission - test level: 47 dBµV/m QP class A (10 m) conforming to EN/IEC 55011
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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

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

Recommended replacement(s)