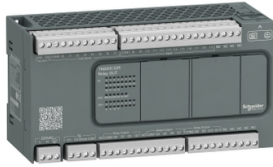


Product datasheet

Specifications



Controller M200 20I/12O relay - 220V AC

TM200C32R

Main

Range of product	Easy Modicon M200
Product or component type	Logic controller
[Us] rated supply voltage	100...240 V AC
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	12 relay
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete input current	7 mA for input
Discrete input logic	Sink or source (positive/negative) type 1 conforming to IEC 61131-2
Discrete output voltage	24 V DC 220 V AC
Discrete output current	2 A
Discrete output type	Relay normally open
Power consumption in VA	55...66 VA at 100...240 V AC (with max I/O)

Complementary

Maximum number of I/O expansion module	4 with 128 discrete output(s) for transistor output 4 with 76 discrete output(s) for relay output
Supply voltage limits	85...264 V
Network frequency	50/60 Hz
Inrush current	50 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 µs turn-off, I0, I1, I6, I7 terminal(s) for high speed input 5 µs turn-on, I0, I1, I6, I7 terminal(s) for high speed input 100 µs turn-off, I2...I5 terminal(s) for fast input 35 µs turn-on, I2...I5 terminal(s) for fast input 100 µs turn-off, I8...I13 terminal(s) for regular input 35 µs turn-on, I8...I13 terminal(s) for regular input 10 ms turn-off, Q0...Q15 terminal(s) for relay output 10 ms turn-on, Q0...Q15 terminal(s) for relay output 125 µs turn-off, I14...I19 terminal(s) for regular input 55 µs turn-on, I14...I19 terminal(s) for regular input

Configurable filtering time	0 ms for input 3 ms for input 12 ms for input
Output voltage limits	30 V DC 250 V AC
Maximum current per output common	4 A at COM 2 4 A at COM 0 4 A at COM 1
Electrical durability	100000 cycles AC-12, 240 V, 480 VA, resistive 100000 cycles DC-12, 24 V, 48 W, resistive
Switching frequency	0.1 Hz with maximum load
Mechanical durability	20000000 cycles for relay output
Minimum load	10 mA at 5 V DC for relay output
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
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	USB port with mini B USB 2.0 connector Non isolated serial link serial 1 with terminal block connector and RS485 interface Non isolated serial link serial 2 with terminal block connector and RS232/RS485 interface Isolated serial link serial 2 with terminal block connector and RS485 interface
Transmission rate	1.2...115.2 kbit/s (115.2 kbit/s by default) for bus length of 15 m for RS485 1.2...115.2 kbit/s (115.2 kbit/s by default) for bus length of 3 m for RS232 12 Mbit/s 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 removable screw terminal blockfor inputs removable screw terminal blockfor outputs removable screw terminal block, 4 terminal(s) for connecting the serial link1 removable screw terminal block, 3 terminal(s) for connecting the 100-240 V AC power supply
Maximum cable distance between devices	Unshielded cable: <50 m for input Shielded cable: <10 m for fast input Shielded cable: <10 m for high speed input Unshielded cable: <150 m for output

Insulation	<p>Non-insulated between inputs</p> <p>Between output and internal logic at 1780 V AC</p> <p>Between output groups at 1780 V AC</p> <p>Between supply and internal logic at 1780 V AC</p> <p>Between input and internal logic at 500 V AC</p> <p>Between fast input and internal logic at 500 V AC</p> <p>Between input groups at 500 V AC</p>
Sensor power supply	24 V DC at 300 mA supplied by the controller
marking	CE
Mounting support	<p>Top hat type TH35-15 rail conforming to IEC 60715</p> <p>Top hat type TH35-7.5 plate or panel with fixing kit conforming to IEC 60715</p>
Height	90 mm
Depth	70 mm
Width	175 mm
Net weight	0.504 kg

Environment

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

Vibration resistance	3.5 mm at 5...8.4 Hz on symmetrical rail 1 gn at 8.4...150 Hz on symmetrical rail 3.5 mm at 5...8.7 Hz on panel mounting 2 gn at 8.7...150 Hz on panel mounting
Relative humidity	10...95 %, without condensation (in operation) 10...95 %, without condensation (in storage)
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	757.5 g
Unit Type of Package 2	S03
Number of Units in Package 2	12
Package 2 Height	30.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	9.571 kg
Unit Type of Package 3	P12
Number of Units in Package 3	288
Package 3 Height	110.0 cm
Package 3 Width	80.0 cm
Package 3 Length	120.0 cm
Package 3 Weight	238.704 kg

Sustainability

Green Premium™ label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



Transparency RoHS/REACH

Well-being performance

Mercury Free

Rohs Exemption Information Yes

Certifications & Standards

Reach Regulation [REACH Declaration](#)

Eu Rohs Directive Pro-active compliance (Product out of EU RoHS legal scope)

China Rohs Regulation [China RoHS declaration](#)

Environmental Disclosure [Product Environmental Profile](#)

Weee The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Circularity Profile [End of Life Information](#)

Dimensions Drawings

Dimensions Drawings

Dimensions

