



Main

Range of product	Modicon Easy M200
Product or component type	Logic controller
[Us] rated supply voltage	24 V DC
Discrete I/O number	16
Discrete input number	1 regular input (I8) 4 fast input (I2...I5) 4 high speed input (I0, I1, I6, I7)
Discrete output number	5 transistor output Q2...Q6 2 fast output (PLS/PWM/PTO mode) Q0...Q1
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 EN/IEC 61131-2
Discrete output voltage	24 V DC
Discrete output current	0.5 A
Discrete output type	Transistor
Discrete output logic	Negative logic (sink)
Power consumption in W	10 W at 24 V DC with max I/O

Complementary

Number of I/O expansion module	<= 4 with <= 135 discrete output(s) for transistor output <= 4 with <= 64 discrete output(s) for relay 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	1 ms during turn-on operation for output with Q0...Q6 terminal(s) 1 ms during turn-off operation for output with Q0...Q6 terminal(s) 100 µs during turn-off operation for regular input with I8 terminal(s) 5 µs during turn-off operation for high speed input with I0, I1, I6, I7 terminal(s)

	5 µs during turn-on operation for high speed input with I0, I1, I6, I7 terminal(s) 100 µs during turn-off operation for fast input with I2...I5 terminal(s) 35 µs during turn-on operation for fast input with I2...I5 terminal(s) 35 µs during turn-on operation for regular input with I8 terminal(s)
Configurable filtering time	0 ms during input 3 ms during input 12 ms during input
Current per output common	3.5 A at COM 0 terminal
Output frequency	100 kHz for fast output (PWM/PLS mode) at Q0...Q1 terminal
Leakage current	0.1 mA for transistor output
Voltage drop	<= 1 V
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 memory for backup of programs
Data storage equipment	32 GB micro SD card (optional)
Battery type	BR2032 Li-CFx (Lithium-Carbon Monofluoride), battery life: 5 yr
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) (positioning frequency: 100 kHz)
Control signal type	Single phase signal at 100 kHz for fast input (HSC mode) Pulse/Direction signal at 100 kHz for fast input (HSC mode) Quadrature (x1, x2, x4) signal at 100 kHz for fast input (HSC mode) CW/CCW signal at 100 kHz for fast input (HSC mode)
Counting input number	4 fast input (HSC mode) (counting frequency: 100 kHz) 32 bits
Integrated connection type	USB port mini B USB 2.0 Non isolated serial link "serial 1" terminal block and interface RS485 Non isolated serial link "serial 2" terminal block and interface RS232/RS485 Isolated serial link "serial 2" terminal block and interface RS485
Transmission rate	1.2...115.2 kbit/s (115.2 kbit/s by default) for bus length of 15 m - communication protocol: RS485 1.2...115.2 kbit/s (115.2 kbit/s by default) for bus length of 3 m - communication protocol: RS232 12 Mbit/s - communication protocol: USB
Communication port protocol	USB port : USB protocol - SoMachine-Network Non isolated serial link : Modbus protocol with master/slave method - RTU/ASCII or SoMachine-Network
Local signalling	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 1 LED red for module error (ERR) 1 LED green for PWR 1 LED green for RUN
Electrical connection	Mini B USB 2.0 connector for a programming terminal Removable screw terminal block for inputs Removable screw terminal block for outputs 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
Cable distance between devices	Shielded cable: 10 m for fast input Unshielded cable: 50 m for input Unshielded cable: 150 m for output Shielded cable: 10 m for high speed input
Insulation	500 V AC between fast input and internal logic Non-insulated between inputs 500 V AC between output and internal logic 500 V AC between input and internal logic 500 V AC between output groups 500 V AC between input groups 500 V DC between supply and internal logic
Marking	CE




Mounting support	Rail top hat type TH35-15 conforming to IEC 60715 Plate or panel with fixing kit top hat type TH35-7.5 conforming to IEC 60715
Height	90 mm
Depth	70 mm
Width	110 mm
Product weight	0.339 kg

Environment

IP degree of protection	IP20 with protective cover in place
Product certifications	CSA cULus IACS E10 RCM
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 Conducted emission (test level: 79 dBµV/m QP/66 dBµV/m AV - power lines (AC)) conforming to EN/IEC 55011 Conducted emission (test level: 73 dBµV/m QP/60 dBµV/m AV - power lines (AC)) 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 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: 2 kV - relay output) 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 Electrical fast transient/burst immunity test (test level: 1 kV - serial link) conforming to EN/IEC 61000-4-4 1.2/50 µs shock waves immunity test (test level: 1 kV - power lines (DC)) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (test level: 2 kV - power lines (AC)) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (test level: 2 kV - relay output) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (test level: 1 kV - I/O) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (test level: 1 kV - shielded cable) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (test level: 0.5 kV - power lines (DC)) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (test level: 1 kV - power lines (AC)) 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
Shock resistance	15 gn (test wave duration:11 ms) 30 gn (test wave duration:6 ms)
Immunity to microbreaks	2 ms
Vibration resistance	3.5 mm (vibration frequency: 5...8.4 Hz) on symmetrical rail 1 gn (vibration frequency: 8.4...150 Hz) on symmetrical rail 3.5 mm (vibration frequency: 5...8.7 Hz) on panel mounting 2 gn (vibration frequency: 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 for horizontal installation
Ambient air temperature for storage	-25...70 °C
Pollution degree	<= 2
Operating altitude	0...2000 m
Storage altitude	0...3000 m

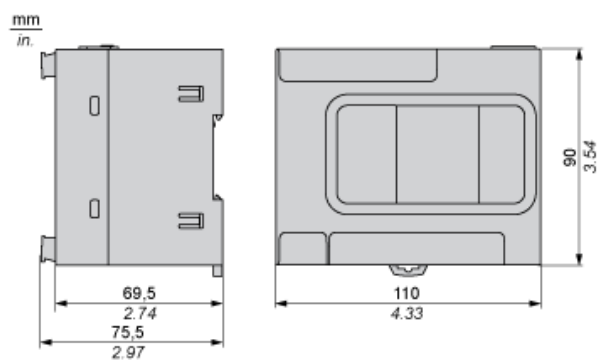
Offer Sustainability

Sustainable offer status	Green Premium product
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RoHS (date code: YYWW)	Compliant - since 1428 - Schneider Electric declaration of conformity  Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold Reference not containing SVHC above the threshold
Product environmental profile	Available  Product environmental
Product end of life instructions	Available  End of life manual

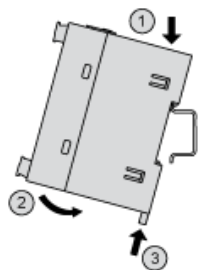
Dimensions Drawings

Dimensions

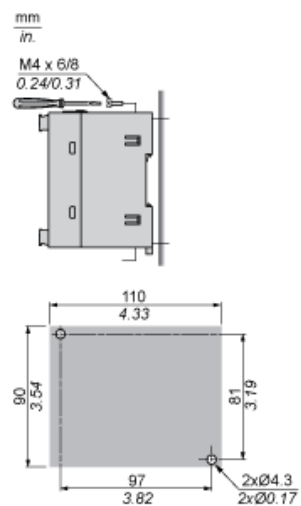


Mounting and Clearance

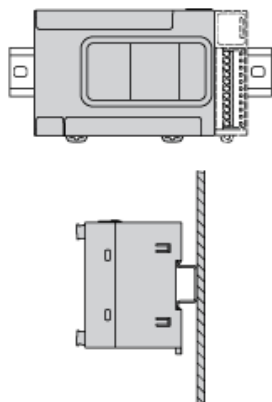
Mounting on a Rail

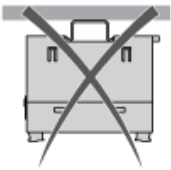
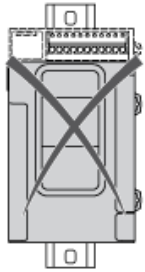


Direct Mounting on a Panel Surface



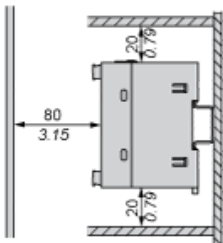
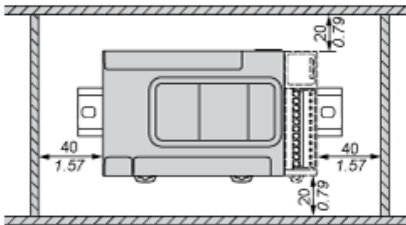
Mounting Position



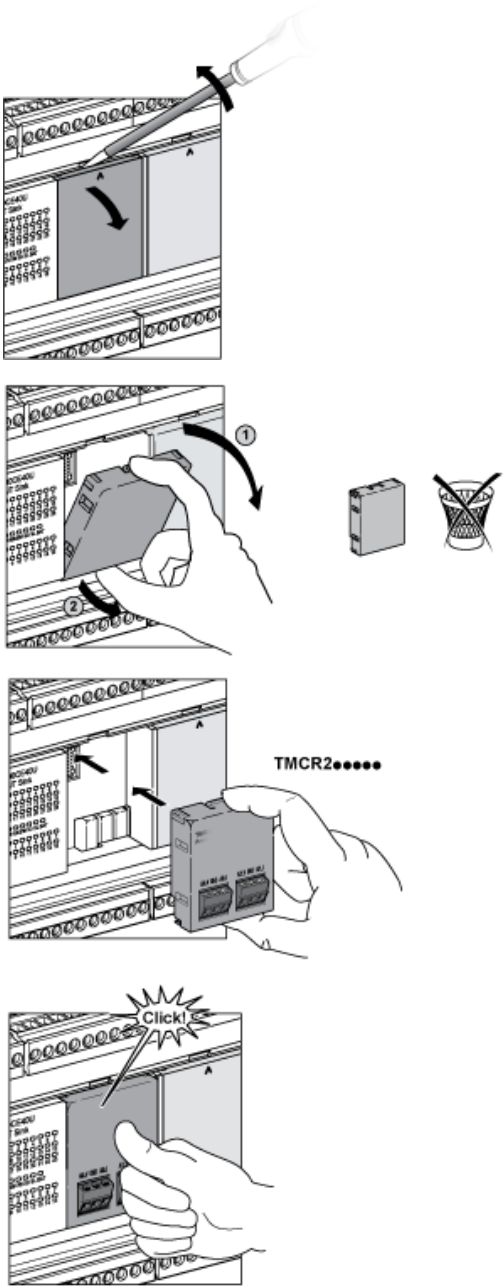


Clearance

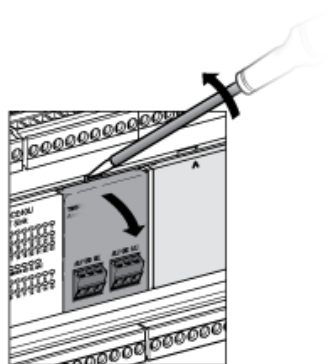
mm
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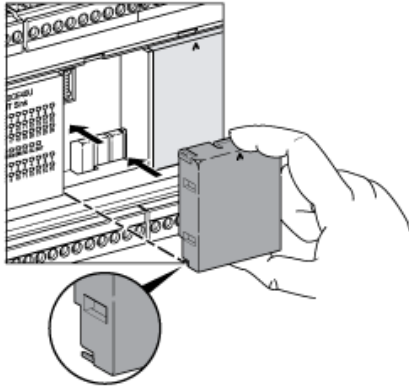
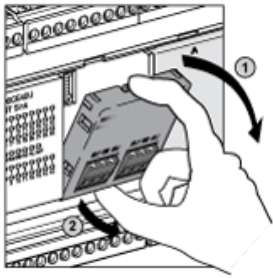


TMCR2...Installation



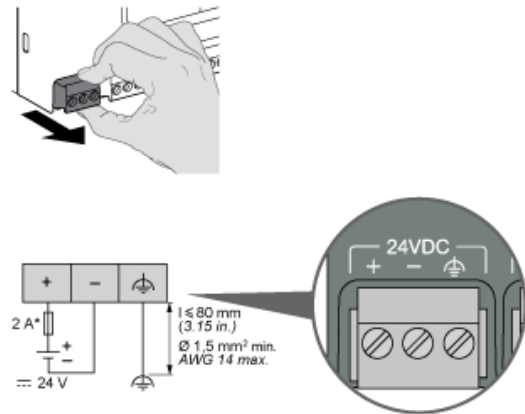
TMCR2... De-Installation





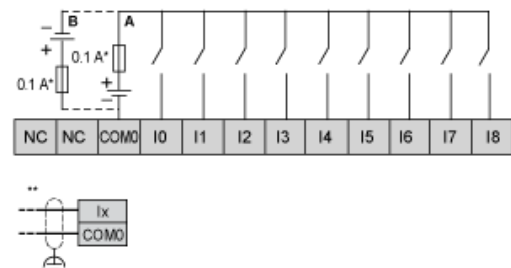
Wiring Diagram / Connections Schema

DC Power Supply



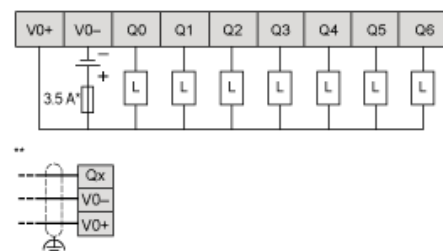
(*) Type T fuse

Digital Inputs (Sink or Source)



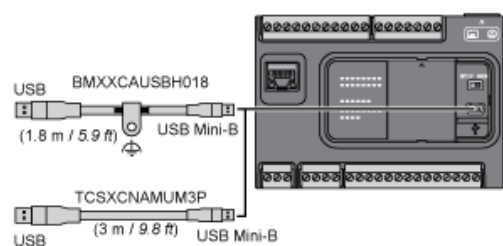
(*) Type T fuse
A : Sink wiring (positive logic)
B : Source wiring (negative logic)
(**) Fast inputs

Regular and Fast Transistor Output

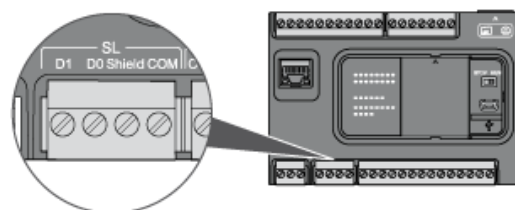


(*) Type T fuse
(**) Fast inputs
(1) The V0+ and V1+ terminals are not connected internally.
(2) The V0- and V1- terminals are not connected internally.

USB Mini-B Connection



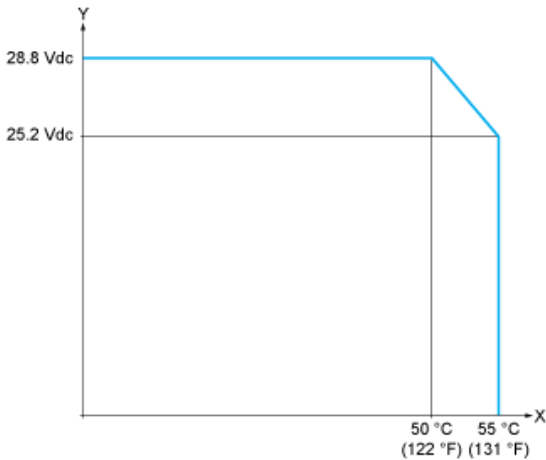
SL1 Connection



D1 : D1 (A+)
D0 : D0 (B-)
Shield : Shield
COM : 0 V Com

Derating Curves

Digital Inputs



X : Ambient temperature (°C / °F)
Y : Input voltage (V)