



Main

Range of product	Easy Modicon M100
Product or component type	Logic controller
[Us] rated supply voltage	100...240 V AC
Discrete I/O number	40
Discrete input number	I2...I5: 4 fast input I0...I1: 2 high speed input I6...I23: 18 regular input
Discrete output number	16 relay
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete input current	7 mA for regular input 7 mA for fast input 9 mA for high speed input
Discrete output voltage	24 V DC 220 V AC
Discrete output current	2 A
Discrete output type	Relay normally open
Power consumption in VA	35...45 VA at 100...240 V AC (with max I/O)

Complementary

Supply voltage limits	85...264 V
Voltage state 1 guaranteed	≥ 15 V for input
Voltage state 0 guaranteed	≤ 5 V for input
Network frequency	50/60 Hz
Inrush current	50 A
Input impedance	3.3 kOhm for regular input 3.3 kOhm for fast input 2.81 kOhm for high speed input
Response time	35 μ s turn-on, I2...I5 terminal(s) for fast input 100 μ s turn-off, I2...I5 terminal(s) for fast input

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

	<p>5 µs turn-on, I0...I1 terminal(s) for high speed input 5 µs turn-off, I0...I1 terminal(s) for high speed input 35 µs turn-on, I6...I13 terminal(s) for regular input 100 µs turn-off, I6...I13 terminal(s) for regular input 10 ms turn-on, Q0...Q15 terminal(s) for relay output 10 ms turn-off, Q0...Q15 terminal(s) for relay output 55 µs turn-on, I14...I23 terminal(s) for regular input 125 µs turn-off, I14...I23 terminal(s) for regular input</p>
Configurable filtering time	<p>0 ms for input 3 ms for input 12 ms for input</p>
Output voltage limits	<p>30 V DC 250 V AC</p>
Maximum current per output common	<p>4 A at COM 0 4 A at COM 1 4 A at COM 2 4 A at COM 3</p>
Electrical durability	<p>100000 cycles AC-12, 240 V, 480 VA, resistive 100000 cycles DC-12, 24 V, 48 W, resistive</p>
Switching frequency	<p>0.1 Hz with maximum load 5 Hz without maximum load</p>
Mechanical durability	<p>20000000 cycles for relay output</p>
Minimum load	<p>10 mA at 5 V DC for relay output</p>
Memory capacity	<p>512 kB internal flash with 10000 instructions for backup of programs</p>
Data storage equipment	<p>32 GB micro SD card (optional)</p>
Execution time for 1 KInstruction	<p>0.3 ms for event and periodic task</p>
Execution time per instruction	<p>0.2 µs Boolean</p>
Exct time for event task	<p>60 µs response time</p>
Clock drift	<p><= 90 s/month at 25 °C</p>
Regulation loop	<p>Adjustable PID regulator up to 14 simultaneous loops</p>
Control signal type	<p>Quadrature (x1, x2, x4) at 60 kHz for fast input (HSC mode) Pulse/direction at 60 kHz for fast input (HSC mode) Single phase at 60 kHz for fast input (HSC mode) CW/CCW at 60 kHz for fast input (HSC mode)</p>
Counting input number	<p>2 fast input (HSC mode) at 60 kHz 32 bits</p>
Integrated connection type	<p>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</p>
Transmission rate	<p>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</p>
Communication port protocol	<p>USB port: USB - SoMachine-Network Non isolated serial link: Modbus master/slave - RTU/ASCII or SoMachine-Network</p>
Local signalling	<p>1 LED (green)PWR: 1 LED (green)RUN: 1 LED (red)module error (ERR): 1 LED (green)SD card access (SD): 1 LED (green)SL1: 1 LED per channel (green)I/O state:</p>
Electrical connection	<p>fixed screw terminal blockfor inputs fixed screw terminal blockfor outputs fixed screw terminal block, 4 terminal(s) for connecting the serial link1 Mini B USB 2.0 connectorfor a programming terminal fixed screw terminal block, 3 terminal(s) for connecting the 100-240 V AC power supply</p>
Maximum cable distance between devices	<p>Shielded cable: <10 m for fast input Shielded cable: <10 m for high speed input Unshielded cable: <150 m for output Unshielded cable: <50 m for regular input</p>
Insulation	<p>Between input and internal logic at 560 V AC Between fast input and internal logic at 560 V AC Between input groups at 560 V AC Non-insulated between inputs Between output and internal logic at 1780 V AC Between output groups at 1780 V AC Between supply and internal logic at 1780 V AC</p>

Sensor power supply	24 V DC
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	0.409 kg

Environment

IP degree of protection	IP20 with protective cover in place
Product certifications	CE
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 dB μ V/m QP/66 dB μ V/m AV (power lines (AC)) conforming to EN/IEC 55011 Conducted emission - test level: 73 dB μ V/m QP/60 dB μ V/m AV (power lines (AC)) conforming to EN/IEC 55011 Radiated emission - test level: 40 dB μ V/m QP class A (10 m) conforming to EN/IEC 55011 Radiated emission - test level: 47 dB μ V/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 μ s shock waves immunity test - test level: 1 kV (power lines (DC)) conforming to EN/IEC 61000-4-5 1.2/50 μ s shock waves immunity test - test level: 2 kV (power lines (AC)) conforming to EN/IEC 61000-4-5 1.2/50 μ s shock waves immunity test - test level: 2 kV (relay output) conforming to EN/IEC 61000-4-5 1.2/50 μ s shock waves immunity test - test level: 1 kV (I/O) conforming to EN/IEC 61000-4-5 1.2/50 μ s shock waves immunity test - test level: 1 kV (shielded cable) conforming to EN/IEC 61000-4-5 1.2/50 μ s shock waves immunity test - test level: 0.5 kV (power lines (DC)) conforming to EN/IEC 61000-4-5 1.2/50 μ s shock waves immunity test - test level: 1 kV (power lines (AC)) conforming to EN/IEC 61000-4-5 1.2/50 μ s shock waves immunity test - test level: 1 kV (relay output) 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 for 11 ms 30 gn for 6 ms
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...8.4 Hz on panel mounting 3 gn at 8.4...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	\leq 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 Weight	617 g
Package 1 Height	7 cm
Package 1 width	9 cm
Package 1 Length	17.5 cm

Offer Sustainability

Sustainable offer status	Green Premium product
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
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

Dimensions Drawings

Dimensions

