



Main

Range of product	Modicon Easy M100
Product or component type	Logic controller
[Us] rated supply voltage	100...240 V AC
Discrete I/O number	16
Discrete input number	4 fast input (I2...I5) 3 regular input (I6...I8) 2 high speed input (I0...I1)
Discrete output number	7 relay
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete input current	9 mA for high speed input 7 mA for regular input 7 mA for fast 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	30...40 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	2.81 kOhm for high speed input 3.3 kOhm for regular input 3.3 kOhm for fast input
Response time	10 ms during turn-on operation for relay output with Q0...Q6 terminal(s) 100 µs during turn-off operation for fast input with I2...I5 terminal(s) 10 ms during turn-off operation for relay output with Q0...Q6 terminal(s) 35 µs during turn-on operation for fast input with I2...I5 terminal(s) 5 µs during turn-on operation for high speed input with I0...I1 terminal(s) 5 µs during turn-off operation for high speed input with I0...I1 terminal(s) 35 µs during turn-on operation for regular input with I6...I8 terminal(s) 100 µs during turn-off operation for regular input with I6...I8 terminal(s)
Configurable filtering time	0 ms during input 3 ms during input 12 ms during input
Output voltage limits	250 V AC 30 V DC
Current per output common	4 A at COM 0 terminal 4 A at COM 1 terminal
Electrical durability	Resistive DC-12, 24 V / 48 W : 100000 cycles Resistive AC-12, 240 V / 480 VA : 100000 cycles
Switching frequency	0.1 Hz with maximum load 5 Hz without maximum load
Mechanical durability	>= 20000000 cycles for relay output
Minimum load	10 mA at 5 V DC for relay output
Memory capacity	512 kB internal flash memory with 10000 instructions for backup of programs
Data storage equipment	32 GB micro SD card (optional)
Execution time for 1 KInstruction	0.3 ms for event and periodic task

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Execution time per instruction	0.2 µs Boolean
Extct time for event task	60 µs response time
Regulation loop	Adjustable PID regulator up to 14 simultaneous loops
Control signal type	Pulse/direction signal at 60 kHz for fast input (HSC mode) Quadrature (x1, x2, x4) signal at 60 kHz for fast input (HSC mode) Single phase signal at 60 kHz for fast input (HSC mode) CW/CCW signal at 60 kHz for fast input (HSC mode)
Counting input number	2 fast input (HSC mode) (counting frequency: 60 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
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 red for module error (ERR) 1 LED green for PWR 1 LED green for RUN 1 LED green for SD card access (SD) 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 Fixed screw terminal block for inputs Fixed screw terminal block for outputs Fixed screw terminal block, 4 terminal(s) for connecting the serial link1 Fixed screw terminal block, 3 terminal(s) for connecting the 100-240 V AC power supply
Cable distance between devices	Shielded cable: 10 m for fast input Unshielded cable: 50 m for regular input Unshielded cable: 150 m for output Shielded cable: 10 m for high speed input
Insulation	Non-insulated between inputs 560 V AC between input and internal logic 560 V AC between fast input and internal logic 560 V AC between input groups 1780 V AC between output and internal logic 1780 V AC between output groups 1780 V AC between supply and internal logic
Sensor power supply	24 V DC
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	0.31 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 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
 1.2/50 µs 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

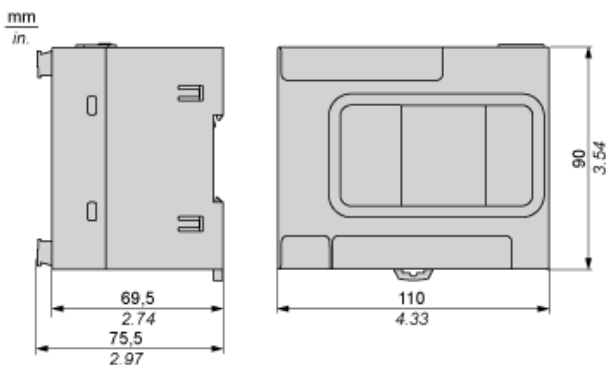
shock resistance	15 gn (test wave duration:11 ms) 30 gn (test wave duration:6 ms)
immunity to microbreaks	10 ms
vibration resistance	3.5 mm (vibration frequency: 5...8.4 Hz) on symmetrical rail 1 gn (vibration frequency: 8.4...150 Hz) on symmetrical rail 3.5 mm (vibration frequency: 5...8.4 Hz) on panel mounting 3 gn (vibration frequency: 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 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
RoHS (date code: YYWW)	Compliant - since 1650 - Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

Dimensions Drawings

Dimensions





Main

Range of product	Modicon Easy M100
Product or component type	Logic controller
[Us] rated supply voltage	100...240 V AC
Discrete I/O number	24
Discrete input number	4 fast input (I2...I5) 2 high speed input (I0...I1) 8 regular input (I6...I13)
Discrete output number	10 relay
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete input current	9 mA for high speed input 7 mA for regular input 7 mA for fast 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	31...43 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	2.81 kOhm for high speed input 3.3 kOhm for regular input 3.3 kOhm for fast input
Response time	100 µs during turn-off operation for fast input with I2...I5 terminal(s) 10 ms during turn-off operation for relay output with Q0...Q9 terminal(s) 10 ms during turn-on operation for relay output with Q0...Q9 terminal(s) 35 µs during turn-on operation for fast input with I2...I5 terminal(s) 100 µs during turn-off operation for regular input with I6...I13 terminal(s) 5 µs during turn-on operation for high speed input with I0...I1 terminal(s) 35 µs during turn-on operation for regular input with I6...I13 terminal(s) 5 µs during turn-off operation for high speed input with I0...I1 terminal(s)
Configurable filtering time	0 ms during input 3 ms during input 12 ms during input
Output voltage limits	250 V AC 30 V DC
Current per output common	4 A at COM 0 terminal 4 A at COM 1 terminal 4 A at COM 2 terminal
Electrical durability	Resistive DC-12, 24 V / 48 W : 100000 cycles Resistive AC-12, 240 V / 480 VA : 100000 cycles
Switching frequency	0.1 Hz with maximum load 5 Hz without maximum load
Mechanical durability	>= 20000000 cycles for relay output
Minimum load	10 mA at 5 V DC for relay output
Memory capacity	512 kB internal flash memory with 10000 instructions for backup of programs
Data storage equipment	32 GB micro SD card (optional)
Execution time for 1 KInstruction	0.3 ms for event and periodic task

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Execution time per instruction	0.2 µs Boolean
Extc time for event task	60 µs response time
Regulation loop	Adjustable PID regulator up to 14 simultaneous loops
Control signal type	Pulse/direction signal at 60 kHz for fast input (HSC mode) Quadrature (x1, x2, x4) signal at 60 kHz for fast input (HSC mode) Single phase signal at 60 kHz for fast input (HSC mode) CW/CCW signal at 60 kHz for fast input (HSC mode)
Counting input number	2 fast input (HSC mode) (counting frequency: 60 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
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 red for module error (ERR) 1 LED green for PWR 1 LED green for RUN 1 LED green for SD card access (SD) 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 Fixed screw terminal block for inputs Fixed screw terminal block for outputs Fixed screw terminal block, 4 terminal(s) for connecting the serial link1 Fixed screw terminal block, 3 terminal(s) for connecting the 100-240 V AC power supply
Cable distance between devices	Shielded cable: 10 m for fast input Unshielded cable: 50 m for regular input Unshielded cable: 150 m for output Shielded cable: 10 m for high speed input
Insulation	Non-insulated between inputs 560 V AC between input and internal logic 560 V AC between fast input and internal logic 560 V AC between input groups 1780 V AC between output and internal logic 1780 V AC between output groups 1780 V AC between supply and internal logic
Sensor power supply	24 V DC
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	130 mm
Product weight	0.351 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 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

1.2/50 µs 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

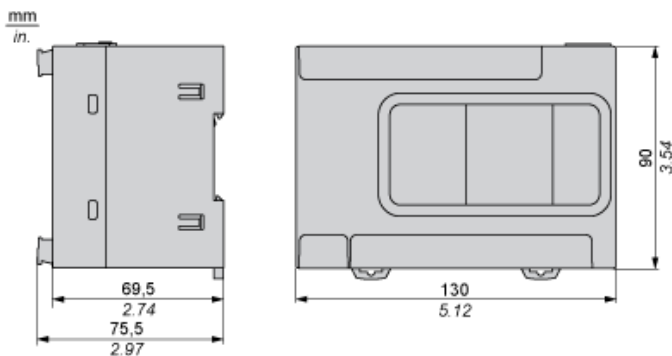
shock resistance	15 gn (test wave duration:11 ms) 30 gn (test wave duration:6 ms)
immunity to microbreaks	10 ms
vibration resistance	3.5 mm (vibration frequency: 5...8.4 Hz) on symmetrical rail 1 gn (vibration frequency: 8.4...150 Hz) on symmetrical rail 3.5 mm (vibration frequency: 5...8.4 Hz) on panel mounting 3 gn (vibration frequency: 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 for horizontal installation
ambient air temperature for storage	-25...70 °C
pollution degree	<= 2
operating altitude	0...2000 m
storage altitude	0...3000 m

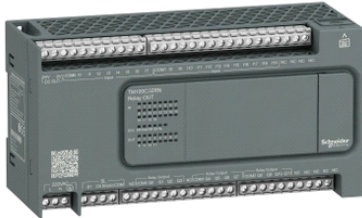
Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1650 - Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

Dimensions Drawings

Dimensions





Main

Range of product	Modicon Easy M100
Product or component type	Logic controller
[Us] rated supply voltage	100...240 V AC
Discrete I/O number	32
Discrete input number	4 fast input (I2...I5) 2 high speed input (I0...I1) 14 regular input (I6...I19)
Discrete output number	12 relay
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete input current	9 mA for high speed input 7 mA for regular input 7 mA for fast 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	32...44 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	2.81 kOhm for high speed input 3.3 kOhm for regular input 3.3 kOhm for fast input
Response time	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) 55 µs during turn-on operation for regular input with I14...I19 terminal(s) 125 µs during turn-off operation for regular input with I14...I19 terminal(s) 100 µs during turn-off operation for regular input with I6...I13 terminal(s) 5 µs during turn-on operation for high speed input with I0...I1 terminal(s) 35 µs during turn-on operation for regular input with I6...I13 terminal(s) 5 µs during turn-off operation for high speed input with I0...I1 terminal(s) 10 ms during turn-on operation for relay output with Q0...Q11 terminal(s) 10 ms during turn-off operation for relay output with Q0...Q11 terminal(s)
Configurable filtering time	0 ms during input 3 ms during input 12 ms during input
Output voltage limits	250 V AC 30 V DC
Current per output common	4 A at COM 0 terminal 4 A at COM 1 terminal 4 A at COM 2 terminal
Electrical durability	Resistive DC-12, 24 V / 48 W : 100000 cycles Resistive AC-12, 240 V / 480 VA : 100000 cycles
Switching frequency	0.1 Hz with maximum load 5 Hz without maximum load
Mechanical durability	>= 20000000 cycles for relay output
Minimum load	10 mA at 5 V DC for relay output
Memory capacity	512 kB internal flash memory with 10000 instructions for backup of programs

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Data storage equipment	32 GB micro SD card (optional)
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
Regulation loop	Adjustable PID regulator up to 14 simultaneous loops
Control signal type	Pulse/direction signal at 60 kHz for fast input (HSC mode) Quadrature (x1, x2, x4) signal at 60 kHz for fast input (HSC mode) Single phase signal at 60 kHz for fast input (HSC mode) CW/CCW signal at 60 kHz for fast input (HSC mode)
Counting input number	2 fast input (HSC mode) (counting frequency: 60 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
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 red for module error (ERR) 1 LED green for PWR 1 LED green for RUN 1 LED green for SD card access (SD) 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 Fixed screw terminal block for inputs Fixed screw terminal block for outputs Fixed screw terminal block, 4 terminal(s) for connecting the serial link1 Fixed screw terminal block, 3 terminal(s) for connecting the 100-240 V AC power supply
Cable distance between devices	Shielded cable: 10 m for fast input Unshielded cable: 50 m for regular input Unshielded cable: 150 m for output Shielded cable: 10 m for high speed input
Insulation	Non-insulated between inputs 560 V AC between input and internal logic 560 V AC between fast input and internal logic 560 V AC between input groups 1780 V AC between output and internal logic 1780 V AC between output groups 1780 V AC between supply and internal logic
Sensor power supply	24 V DC
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	175 mm
Product weight	0.435 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 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 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 (test wave duration:11 ms) 30 gn (test wave duration:6 ms)
immunity to microbreaks	10 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...8.4 Hz) on panel mounting 3 gn (vibration frequency: 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 for horizontal installation
ambient air temperature for storage	-25...70 °C
pollution degree	<= 2
operating altitude	0...2000 m
storage altitude	0...3000 m

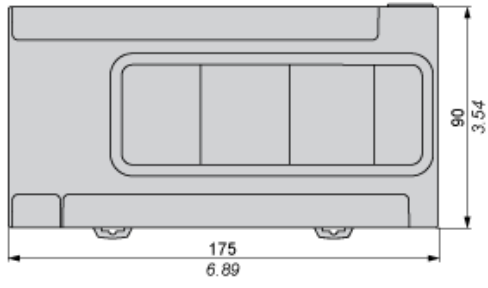
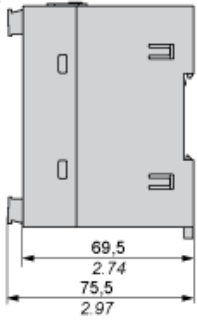
Offer Sustainability

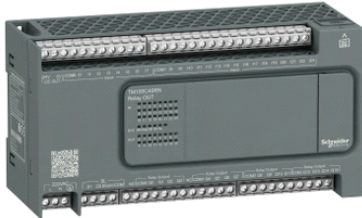
Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1650 - Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

Dimensions Drawings

Dimensions

mm
in.





Main

Range of product	Modicon Easy M100
Product or component type	Logic controller
[Us] rated supply voltage	100...240 V AC
Discrete I/O number	40
Discrete input number	4 fast input (I2...I5) 2 high speed input (I0...I1) 18 regular input (I6...I23)
Discrete output number	16 relay
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete input current	9 mA for high speed input 7 mA for regular input 7 mA for fast 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	2.81 kOhm for high speed input 3.3 kOhm for regular input 3.3 kOhm for fast input
Response time	100 µs during turn-off operation for fast input with I2...I5 terminal(s) 125 µs during turn-off operation for regular input with I14...I23 terminal(s) 55 µs during turn-on operation for regular input with I14...I23 terminal(s) 35 µs during turn-on operation for fast input with I2...I5 terminal(s) 10 ms during turn-off operation for relay output with Q0...Q15 terminal(s) 10 ms during turn-on operation for relay output with Q0...Q15 terminal(s) 100 µs during turn-off operation for regular input with I6...I13 terminal(s) 5 µs during turn-on operation for high speed input with I0...I1 terminal(s) 35 µs during turn-on operation for regular input with I6...I13 terminal(s) 5 µs during turn-off operation for high speed input with I0...I1 terminal(s)
Configurable filtering time	0 ms during input 3 ms during input 12 ms during input
Output voltage limits	250 V AC 30 V DC
Current per output common	4 A at COM 0 terminal 4 A at COM 1 terminal 4 A at COM 2 terminal 4 A at COM 3 terminal
Electrical durability	Resistive DC-12, 24 V / 48 W : 100000 cycles Resistive AC-12, 240 V / 480 VA : 100000 cycles
Switching frequency	0.1 Hz with maximum load 5 Hz without maximum load
Mechanical durability	>= 20000000 cycles for relay output
Minimum load	10 mA at 5 V DC for relay output
Memory capacity	512 kB internal flash memory with 10000 instructions for backup of programs

The information provided in this documentation contains general descriptions and/or technical characteristics of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Data storage equipment	32 GB micro SD card (optional)
Execution time for 1 KInstruction	0.3 ms for event and periodic task
Execution time per instruction	0.2 μ s Boolean
Extct time for event task	60 μ s response time
Clock drift	\leq 90 s/month at 25 °C
Regulation loop	Adjustable PID regulator up to 14 simultaneous loops
Control signal type	Pulse/direction signal at 60 kHz for fast input (HSC mode) Quadrature (x1, x2, x4) signal at 60 kHz for fast input (HSC mode) Single phase signal at 60 kHz for fast input (HSC mode) CW/CCW signal at 60 kHz for fast input (HSC mode)
Counting input number	2 fast input (HSC mode) (counting frequency: 60 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
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 red for module error (ERR) 1 LED green for PWR 1 LED green for RUN 1 LED green for SD card access (SD) 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 Fixed screw terminal block for inputs Fixed screw terminal block for outputs Fixed screw terminal block, 4 terminal(s) for connecting the serial link1 Fixed screw terminal block, 3 terminal(s) for connecting the 100-240 V AC power supply
Cable distance between devices	Shielded cable: 10 m for fast input Unshielded cable: 50 m for regular input Unshielded cable: 150 m for output Shielded cable: 10 m for high speed input
Insulation	Non-insulated between inputs 560 V AC between input and internal logic 560 V AC between fast input and internal logic 560 V AC between input groups 1780 V AC between output and internal logic 1780 V AC between output groups 1780 V AC between supply and internal logic
Sensor power supply	24 V DC
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	175 mm
Product 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 (test wave duration:11 ms) 30 gn (test wave duration:6 ms)
immunity to microbreaks	10 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...8.4 Hz) on panel mounting 3 gn (vibration frequency: 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 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
RoHS (date code: YYWW)	Compliant - since 1650 - Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

Dimensions Drawings

Dimensions

mm
in.

