



Price\* : 459.00 USD



### Main

Range of product	Modicon M241
Product or component type	Logic controller
[Us] rated supply voltage	100...240 V AC
Discrete input number	14, discrete input 8 fast input IEC 61131-2 Type 1
Discrete output type	Transistor Relay
Discrete output number	6 relay 4 transistor 4 fast output
Discrete output voltage	5...125 V DC relay output 5...250 V AC relay output 24 V DC transistor output
Discrete output current	2 A relay output Q4...Q9) 0.1 A fast output (PTO mode) TR0...TR3) 0.5 A transistor output TR0...TR3)

### Complementary

Discrete I/O number	24
Maximum number of I/O expansion module	7 local 14 remote
Supply voltage limits	85...264 V
Network frequency	50/60 Hz
Discrete input logic	Sink or source
Discrete input voltage	24 V
Discrete input voltage type	DC
Voltage state 1 guaranteed	$\geq 15$ V input
Voltage state 0 guaranteed	$\leq 5$ V input
Discrete input current	5 mA input
Input impedance	4.7 kOhm input

\* Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Response time	50 µs turn-on, I0...I13 input
Configurable filtering time	1 µs fast input
Discrete output logic	Positive logic (source)
Output voltage limits	125 V DC relay output 30 V DC transistor output 277 V AC relay output
Maximum output frequency	1 kHz transistor output 20 kHz fast output (PWM mode) 100 kHz fast output (PLS mode)
Accuracy	+/- 0.1 % 0.02...0.1 kHz fast output +/- 1 % 0.1...1 kHz fast output
Protection type	Short-circuit protection transistor output Short-circuit and overload protection with automatic reset transistor output Reverse polarity protection transistor output Without protection relay output
Reset time	10 ms automatic reset output 12 s automatic reset fast output
Memory capacity	8 MB program 64 MB system memory RAM
Data backed up	128 MB built-in flash memory backup of user programs
Data storage equipment	<= 16 GB SD card optional)
Battery type	BR2032 lithium non-rechargeable 4 year(s)
Backup time	2 years 77 °F (25 °C)
Execution time for 1 KInstruction	0.3 ms event and periodic task 0.7 ms other instruction
Application structure	4 cyclic master tasks 3 cyclic master tasks + 1 freewheeling task 8 external event tasks 8 event tasks
Realtime clock	With
Clock drift	<= 60 s/month 77 °F (25 °C)
Positioning functions	PTO 4 100 kHz)
Counting input number	4 fast input (HSC mode) 200 kHz 14 standard input 1 kHz
Control signal type	A/B 100 kHz fast input (HSC mode) Pulse/direction 200 kHz fast input (HSC mode) Single phase 200 kHz fast input (HSC mode)
Integrated connection type	Non isolated serial link serial 1 RJ45 RS232/RS485 Non isolated serial link serial 2 removable screw terminal block RS485 USB port mini B USB 2.0
Supply	Serial 1)serial link supply 5 V, <200 mA
Transmission rate	1.2...115.2 kbit/s (115.2 kbit/s by default) 49.21 ft (15 m) RS485 1.2...115.2 kbit/s (115.2 kbit/s by default) 9.84 ft (3 m) RS232 480 Mbit/s 9.84 ft (3 m) USB
Communication port protocol	Non isolated serial link Modbus master/slave
Local signalling	for PWR 1 LED (green) for RUN 1 LED (green) for module error (ERR) 1 LED (red) for I/O error (I/O) 1 LED (red) for SD card access (SD) 1 LED (green) for BAT 1 LED (red) for SL1 1 LED (green) for SL2 1 LED (green) for bus fault on TM4 (TM4) 1 LED (red) for I/O state 1 LED per channel (green)
Electrical connection	removable screw terminal block for inputs and outputs pitch 5.08 mm) removable screw terminal block for connecting the 24 V DC power supply pitch 5.08 mm)
Maximum cable distance between devices	Unshielded cable <164.04 ft (50 m) input Shielded cable <32.81 ft (10 m) fast input Unshielded cable <164.04 ft (50 m) output Shielded cable <9.84 ft (3 m) fast output
Insulation	Between supply and internal logic 500 V AC Non-insulated between supply and ground

Marking	CE
Sensor power supply	24 V DC 400 mA supplied by the controller
Surge withstand	2 kV power lines (AC) common mode EN/IEC 61000-4-5 2 kV relay output common mode EN/IEC 61000-4-5 1 kV shielded cable common mode EN/IEC 61000-4-5 1 kV power lines (AC) differential mode EN/IEC 61000-4-5 1 kV relay output differential mode EN/IEC 61000-4-5 1 kV input common mode EN/IEC 61000-4-5 1 kV transistor output common mode EN/IEC 61000-4-5
Mounting support	Top hat type TH35-15 rail IEC 60715 Top hat type TH35-7.5 rail IEC 60715 plate or panel with fixing kit
Height	3.54 in (90 mm)
Depth	3.74 in (95 mm)
Width	5.91 in (150 mm)
Net Weight	1.17 lb(US) (0.53 kg)

## Environment

Standards	ANSI/ISA 12-12-01 CSA C22.2 No 142 CSA C22.2 No 213 EN/IEC 61131-2:2007 Marine specification (LR, ABS, DNV, GL) UL 1604 UL 508
Product certifications	IACS E10 RCM CULus CSA
Resistance to electrostatic discharge	8 kV in air EN/IEC 61000-4-2 4 kV on contact EN/IEC 61000-4-2
Resistance to electromagnetic fields	9.14 V/m (10 V/m) 80 MHz...1 GHz EN/IEC 61000-4-3 2.74 V/m (3 V/m) 1.4 GHz...2 GHz EN/IEC 61000-4-3 0.91 V/m (1 V/m) 2 GHz...3 GHz EN/IEC 61000-4-3
Resistance to fast transients	2 kV EN/IEC 61000-4-4 power lines) 2 kV EN/IEC 61000-4-4 relay output) 1 kV EN/IEC 61000-4-4 serial link) 1 kV EN/IEC 61000-4-4 input) 1 kV EN/IEC 61000-4-4 transistor output)
Resistance to conducted disturbances	10 V 0.15...80 MHz EN/IEC 61000-4-6 3 V 0.1...80 MHz Marine specification (LR, ABS, DNV, GL) 10 V spot frequency (2, 3, 4, 6.2, 8.2, 12.6, 16.5, 18.8, 22, 25 MHz) Marine specification (LR, ABS, DNV, GL)
Electromagnetic emission	Conducted emissions 120...69 dB $\mu$ V/m QP power lines)10...150 kHz EN/IEC 55011 Conducted emissions 63 dB $\mu$ V/m QP power lines)1.5...30 MHz EN/IEC 55011 Conducted emissions 79 dB $\mu$ V/m QP/66 dB $\mu$ V/m AV power lines)0.15...0.5 MHz EN/IEC 55011 Conducted emissions 73 dB $\mu$ V/m QP/60 dB $\mu$ V/m AV power lines)0.5...300 MHz EN/IEC 55011 Radiated emissions 40 dB $\mu$ V/m QP class A 10 m)30...230 MHz EN/IEC 55011 Conducted emissions 79...63 dB $\mu$ V/m QP power lines)150...1500 kHz EN/IEC 55011 Radiated emissions 47 dB $\mu$ V/m QP class A 10 m)230...1000 MHz EN/IEC 55011
Immunity to microbreaks	10 ms
Ambient air temperature for operation	14...122 °F (-10...50 °C) vertical installation) 14...131 °F (-10...55 °C) horizontal installation)
Ambient air temperature for storage	-13...158 °F (-25...70 °C)
Relative humidity	10...95 %, without condensation in operation) 10...95 %, without condensation in storage)
IP degree of protection	IP20 with protective cover in place
Pollution degree	2
Operating altitude	0...6561.68 ft (0...2000 m)
Storage altitude	0.00...9842.52 ft (0...3000 m)
Vibration resistance	3.5 mm 5...8.4 Hz symmetrical rail 3 gn 8.4...150 Hz symmetrical rail 3.5 mm 5...8.4 Hz panel mounting 3 gn 8.4...150 Hz panel mounting

Shock resistance	15 gn 11 ms
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## Ordering and shipping details

Category	22533 - M2XX PLC & ACCESSORIES
Discount Schedule	MSX
GTIN	03606480648816
Nbr. of units in pkg.	1
Package weight(Lbs)	1 lb(US) (0.45 kg)
Returnability	Yes
Country of origin	ID

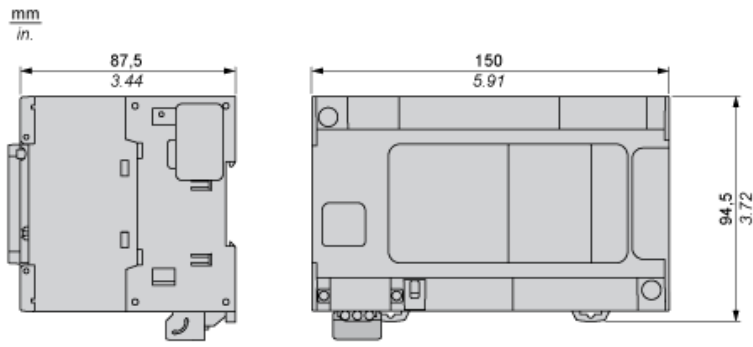
## Packing Units

Unit Type of Package 1	PCE
Package 1 Height	4.43 in (11.253 cm)
Package 1 width	5.21 in (13.231 cm)
Package 1 Length	7.35 in (18.673 cm)

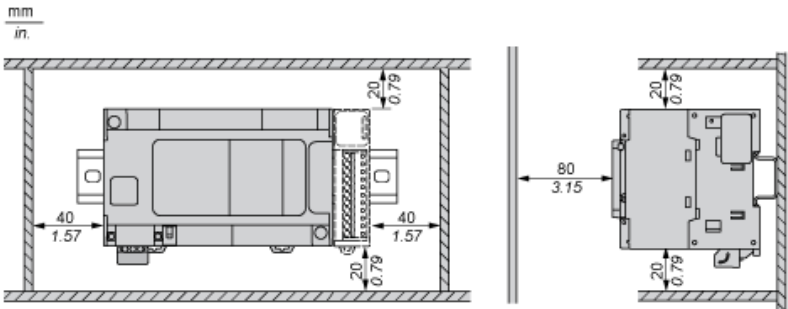
## Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
RECh Regulation	<a href="#">RECh Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.
PVC free	Yes

Dimensions



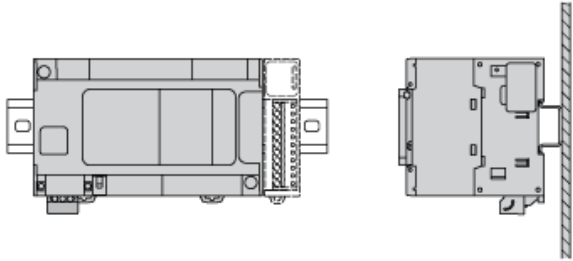
Clearance



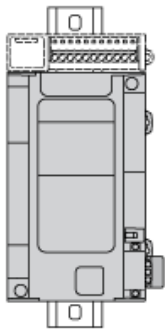
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Mounting Position

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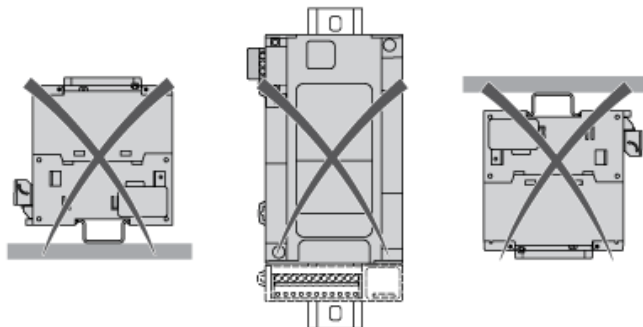


Acceptable Mounting



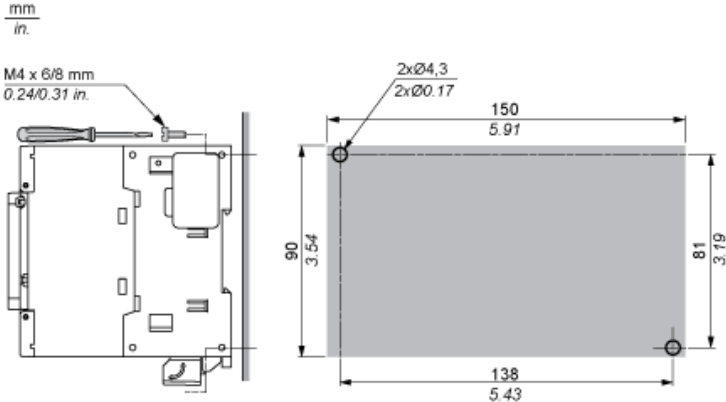
NOTE: Expansion modules must be mounted above the logic controller.

Incorrect Mounting



Direct Mounting On a Panel Surface

Mounting Hole Layout



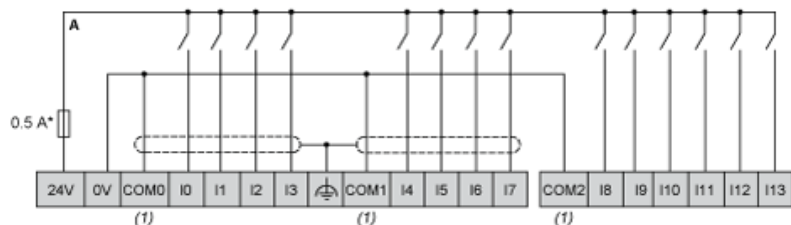


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Digital Inputs

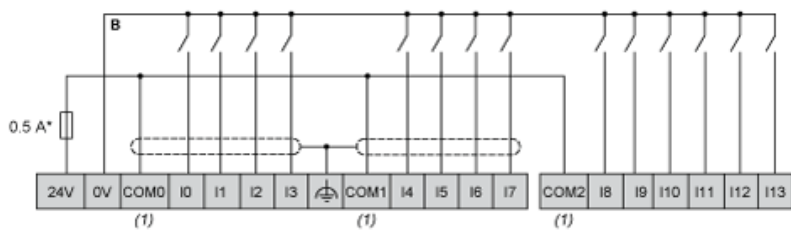
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Wiring Diagram (Positive Logic)



- (\*) : Type T fuse
- (1) : The COM0, COM1 and COM2 terminals are not connected internally.

Wiring Diagram (Negative Logic)



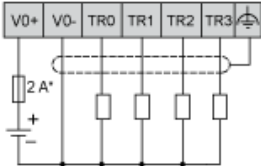
- (\*) : Type T fuse
- (1) : The COM0, COM1 and COM2 terminals are not connected internally.

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Fast Transistor Outputs

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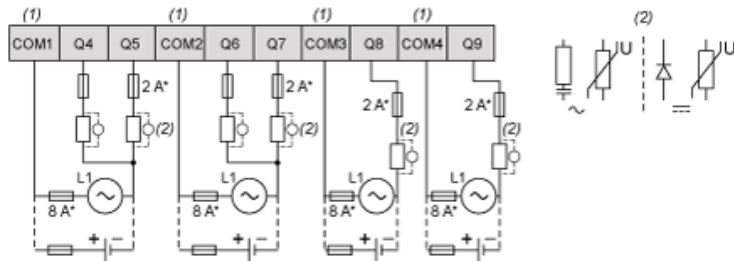
Wiring Diagram



(\*) : 2 A fast-blow fuse

Relay Outputs

Wiring Diagram



- (\*) : Type T fuse
- (1) : The terminals COM1 to COM4 are not connected internally.
- (2) : To improve the life time of the contacts, and to protect from potential inductive load damage, you must connect a free wheeling diode in parallel to ea

USB Mini-B Connection

