Product data sheet
Characteristics

TM241CE40R
logic controller, Modicon M241, 40 IO, relay, Ethernet

Galvenā

Produkta sērija	Modicon M241
Produkta vai sastāvdaļas veids	Logic controller
[Us] rated supply voltage	100...240 V AC
Discrete input number	24, discrete input 8 fast input IEC 61131-2 Type 1
Discrete output type	Relay Transistor
Discrete output number	4 transistor 4 fast output 12 relay
Discrete output voltage	5...125 V DC releja izeja 5...250 V AC releja izeja 24 V DC transistor output
Discrete output current	0.1 A fast output (PTO mode) TR0...TR3) 2 A releja izeja Q4...Q15) 0.5 A transistor output TR0...TR3)

Papildinošs

Discrete I/O number	40
Maximum number of I/O expansion module	7 local 14 remote
Supply voltage limits	85…264 V
Tīkla frekvence	50/60 Hz
Discrete input logic	Sink or source
Discrete input voltage	24 V
Discrete input voltage type	DC
Voltage state 1 guaranteed	>= 15 V ievade
Voltage state 0 guaranteed	<= 5 V ievade
Discrete input current	7 mA ievade
Input impedance	4.7 kOhm ievade
Response time	50 µs turn-on, I0...I15 ievade
Configurable filtering time	1 µs fast input
Discrete output logic	Positive logic (source)
Output voltage limits	125 V DC releja izeja 30 V DC transistor output 277 V AC releja izeja
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
Aizsardzības tips	Īssavienojuma aizsardzība priekš transistor output Īssavienojuma un pārslodzes aizsardzība ar automātisku atiestatīšanu priekš transistor output Reverse polarity protection priekš transistor output Without protection priekš releja izeja
Reset time	10 Ms automatic reset izvade 12 s automatic reset fast output
Memory capacity	64 MB system memory RAM
Data backed up	128 MB built-in flash memory backup of user programs
Data storage equipment	<= 16 GB SD karte nav obligāti)

Battery type	BR2032 lithium non-rechargeable 4 gads(-i)
Backup time	2 years 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 8 event tasks 8 external event tasks 3 cyclic master tasks + 1 freewheeling task
Realtime clock	With
Clock drift	<= 60 s/month 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 ports mini B USB 2.0 Ethernet RJ45
Supply	Serial 1)serial link supply 5 V, <200 mA
Transmission rate	1.2...115.2 kbit/s (115.2 kbit/s by default) 15 m RS485 1.2...115.2 kbit/s (115.2 kbit/s by default) 3 m RS232 480 Mbit/s 3 m USB 10/100 Mbit/s Ethernet
Communication port protocol	Non isolated serial link Modbus master/slave
Port Ethernet	10BASE-T/100BASE-TX - 1 copper cable
Ethernet services	FDR DHCP server via TM4 Ethernet switch network module DHCP client embedded Ethernet port SMS notifications Updating firmware SNMP client/server Programming NGVL Monitoring IEC VAR ACCESS FTP client/server Downloading SQL client Modbus TCP client I/O scanner Ethernet/IP originator I/O scanner embedded Ethernet port Ethernet/IP target, Modbus TCP server and Modbus TCP slave Send and receive email from the controller based on TCP/UDP library Web server (WebVisu & XWeb system) OPC UA server DNS client
Lokālā signalizēšana	Priekš PWR 1 LED (zaļš) Priekš RUN 1 LED (zaļš) Priekš module error (ERR) 1 LED (sarkans) Priekš I/O error (I/O) 1 LED (sarkans) Priekš SD card access (SD) 1 LED (zaļš) Priekš BAT 1 LED (sarkans) Priekš SL1 1 LED (zaļš) Priekš SL2 1 LED (zaļš) Priekš bus fault on TM4 (TM4) 1 LED (sarkans) Priekš I/O state 1 LED uz kanālu (zaļš) Priekš Ethernet port activity 1 LED (zaļš)
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 <50 m ievade Shielded cable <10 m fast input Unshielded cable <50 m izvade Shielded cable <3 m fast output
Insulation	Between supply and internal logic 500 V AC Non-insulated between supply and ground
Marķējums	CE
Sensor power supply	24 V DC 400 mA supplied by the controller

Surge withstand	2 KV power lines (AC) common mode IEC 61000-4-5 2 KV relay output common mode IEC 61000-4-5 1 KV shielded cable common mode IEC 61000-4-5 1 KV power lines (AC) differential mode IEC 61000-4-5 1 KV relay output differential mode IEC 61000-4-5 1 KV input common mode IEC 61000-4-5 1 kV transistor output common mode IEC 61000-4-5
Web services	Web server
Maximum number of connections	8 Modbus server 8 SoMachine protocol 10 web server 4 FTP server 16 Ethernet/IP target 8 Modbus client
Number of server device(s)	64 Modbus TCP 16 Ethernet/IP
Cycle time	10 Ms 16 Ethernet/IP 64 ms 64 Modbus TCP
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
Augstums	90 mm
Dziļums	95 mm
Platums	190 mm
Neto svars	0,62 kg

Vide

Standarti	ANSI/ISA 12-12-01 CSA C22.2 No 142 CSA C22.2 No 213 IEC 61131-2:2007. gads Marine specification (LR, ABS, DNV, GL) UL 508
Produkta sertifikācija	RCM[RETURN]cULus[RETURN]CE[RETURN]UKCA[RETURN]DNV-GL[RETURN]ABS[RETURN]LR
Resistance to electrostatic discharge	8 KV in air IEC 61000-4-2 4 kV on contact IEC 61000-4-2
Resistance to electromagnetic fields	10 V/M 80 MHz...1 GHz IEC 61000-4-3 3 V/M 1.4 GHz...2 GHz IEC 61000-4-3 1 V/m 2 GHz...3 GHz IEC 61000-4-3
Resistance to fast transients	2 KV IEC 61000-4-4 power lines) 2 KV IEC 61000-4-4 relay output) 1 KV IEC 61000-4-4 Ethernet line) 1 KV IEC 61000-4-4 serial link) 1 KV IEC 61000-4-4 input) 1 kV IEC 61000-4-4 transistor output)
Resistance to conducted disturbances	10 V 0.15...80 MHz 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 dBµV/m QP power lines)10…150 kHz IEC 55011 Conducted emissions 63 dBµV/m QP power lines)1,5…30 MHz IEC 55011 Conducted emissions 79 dBµV/m QP/66 dBµV/m AV power lines)0,15…0,5 MHz IEC 55011 Conducted emissions 73 dBµV/m QP/60 dBµV/m AV power lines)0,5…300 MHz IEC 55011 Radiated emissions 40 dBµV/m QP class A 10 m)30…230 MHz IEC 55011 Conducted emissions 79...63 dBµV/m QP power lines)150…1500 kHz IEC 55011 Radiated emissions 47 dBµV/m QP class A 10 m)230…1000 MHz IEC 55011
Immunity to microbreaks	10 ms
Ambient air temperature for operation	-10…50 °C vertical installation) -10…55 °C horizontal installation)
Apkārtējā gaisa temperatūra uzglabāšanai	-25…70 °C
Relative humidity	10…95 %, without condensation in operation) 10…95 %, without condensation in storage)
IP aizsardzības pakāpe	IP20 with protective cover in place
Piesārņojuma pakāpe	2
Darbības augstums	0...2000 m

Uzglabāšanas augstums	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

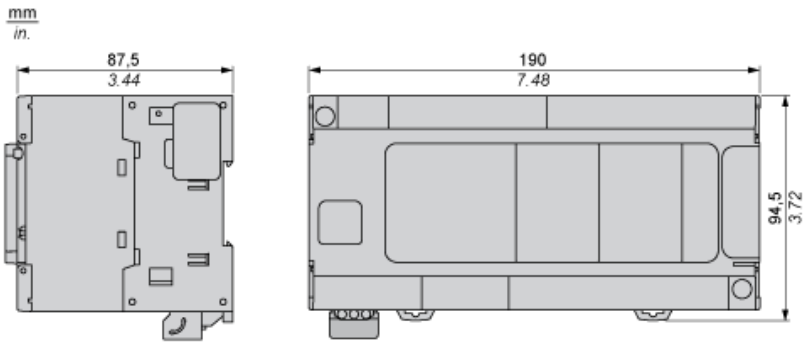
Iepakošanas vienības

Pirmā iepakojuma vienības tips	PCE
Vienību skaits 1. iepakojumā	1
1. iepakojuma augstums	12,8 cm
1. iepakojuma platums	22,6 cm
1. iepakojuma garums	11,5 cm
1. iepakojuma svars	933,0 g
Otrā iepakojuma vienības tips	S03
Vienību skaits 2. iepakojumā	6
2. iepakojuma augstums	30 cm
2. iepakojuma platums	30 cm
2. iepakojuma garums	40 cm
2. iepakojuma svars	5,827 kg
Trešā iepakojuma vienības tips	P06
Vienību skaits 3. iepakojumā	48
3. iepakojuma augstums	75,0 cm
3. iepakojuma platums	40,0 cm
3. iepakojuma garums	80,0 cm
3. iepakojuma svars	60 kg

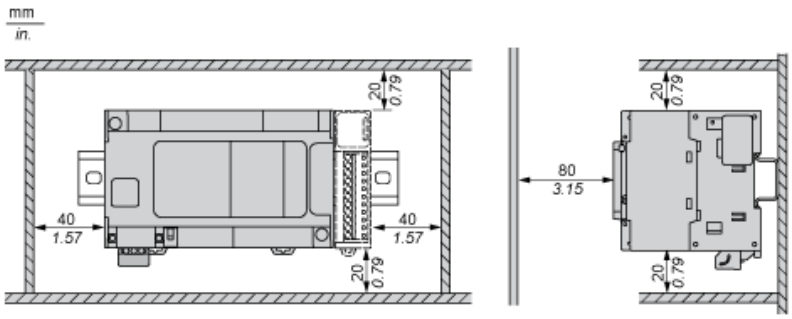
Piedāvājiet ilgtspēju

Ilgtspējīgs piedāvājuma statuss	Green Premium izstrādājums
REACh regula	REACh Deklarācija
ES RoHS direktīva	Proaktīva atbilstība (uz izstrādājumu neattiecas ES RoHS juridiskās saistības)
Nesatur dzīvsudrabu	Jā
Ķīnas RoHS regula	Ķīnas RoHS Deklarācija
Informācija par RoHS izņēmumiem	Jā
Vides informācijas publiskošana	Produkta Ietekme Uz Vidi
Cirkularitātes profils	Informācija Par Ekspluatācijas Izbeigšanu
WEEE	Eiropas Savienības tirgū no šī produkta ir jāatbrīvojas, ievērojot noteiktu atkritumu savākšanas kārtību, un produkts nedrīkst nonākt sadzīves atkritumu tvertnēs.
Nesatur PVH	Jā

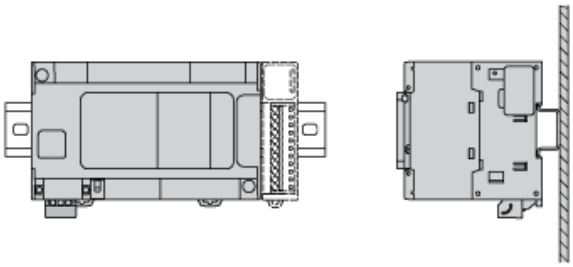
Dimensions



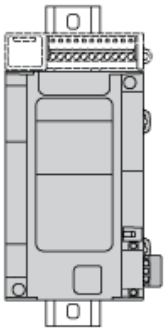
Clearance



Mounting Position

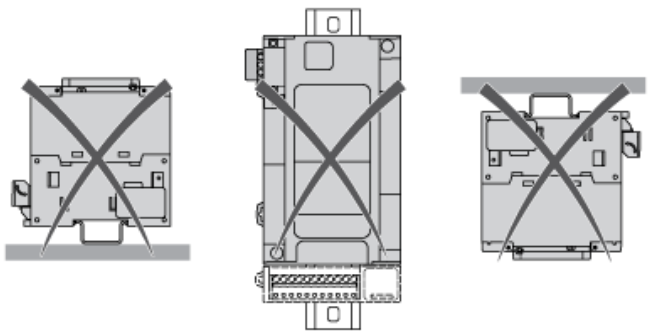


Acceptable Mounting



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

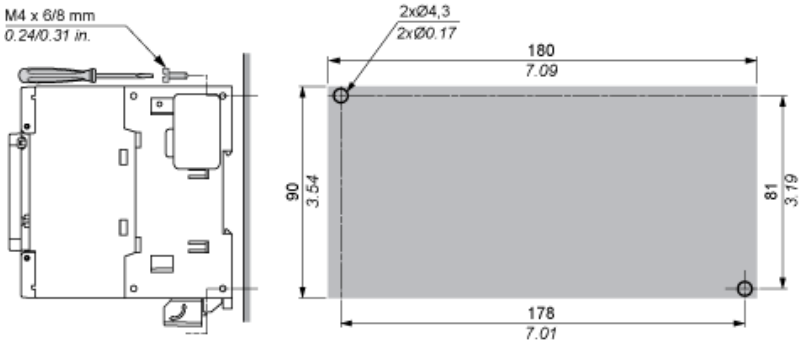
Incorrect Mounting



Direct Mounting On a Panel Surface

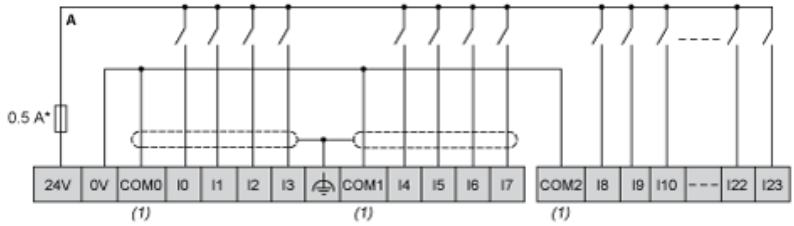
Mounting Hole Layout

mm
in.



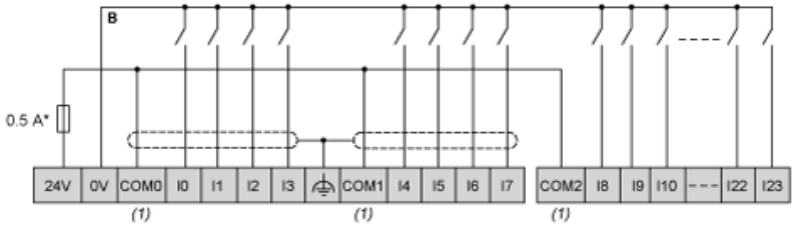
Digital Inputs

Wiring Diagram (Positive Logic)



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

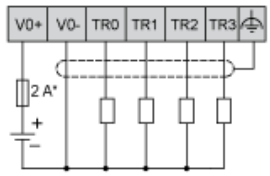
Wiring Diagram (Negative Logic)



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

Fast Transistor Outputs

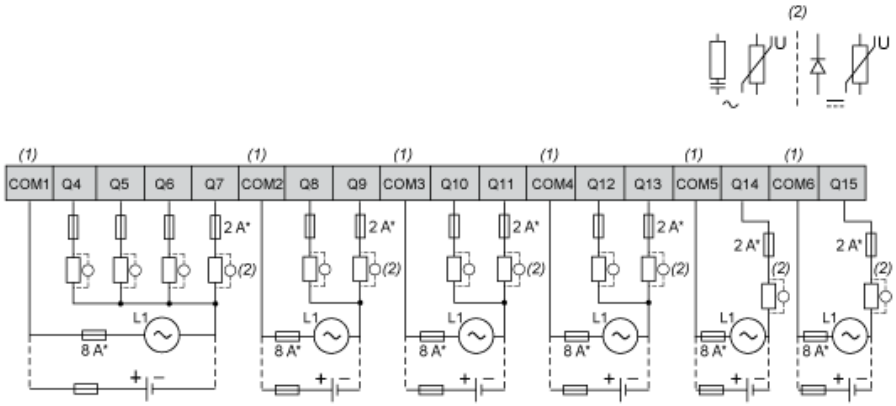
Wiring Diagram



(*) : 2 A fast-blow fuse

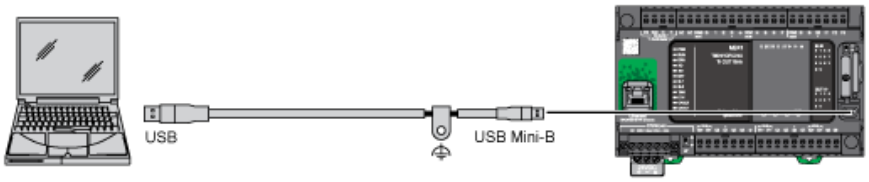
Relay Outputs

Wiring Diagram



(*) : Type T fuse
(1) : The terminals COM1 to COM6 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 each inductive DC load or an RC snubber in parallel of each inductive AC load

USB Mini-B Connection



Ethernet Connection to a PC