



logic controller, Modicon M241, 24 IO, transistor, PNP, Ethernet

TM241CE24T

Main

Range of product	Modicon M241	
Product or component type	Logic controller	
[Us] rated supply voltage	24 V DC	
Discrete input number	14, discrete input 8 fast input conforming to IEC 61131-2 Type 1	
Discrete output type	Transistor	
Discrete output number	10 transistor 4 fast output	
Discrete output voltage	24 V DC for transistor output	
Discrete output current	0.5 A for transistor output (Q0Q9) 0.1 A for fast output (PTO mode) (Q0Q3)	

Complementary

Discrete I/O number	24
	۲٦
Maximum number of I/O	7 (local I/O-Architecture)
expansion module	14 (remote I/O-Architecture)
Supply voltage limits	20.428.8 V
Inrush current	50 A
Power consumption in W	32.640.4 W (with max number of I/O expansion module)
Discrete input logic	Sink or source
Discrete input voltage	24 V
Discrete input voltage type	DC
Voltage state 1 guaranteed	>= 15 V for input
Voltage state 0 guaranteed	<= 5 V for input
Discrete input current	5 mA for input
	10.7 mA for fast input
Input impedance	4.7 kOhm for input
	2.81 kOhm for fast input
Response time	50 μs turn-on, I0I13 terminal(s) for input
	50 µs turn-off, I0I13 terminal(s) for input
	<= 2 μs turn-on, I0I7 terminal(s) for fast input
	<= 2 μs turn-off, I0I7 terminal(s) for fast input
	<= 34 μs turn-on, Q0Q9 terminal(s) for output
	<= 250 μs turn-off, Q0Q9 terminal(s) for output
	<= 2 μs turn-on, Q0Q3 terminal(s) for fast output

<= 2 µs turn-off, Q0...Q3 terminal(s) for fast output

Configurable filtering time	1 µs for fast input 12 ms for fast input 0 ms for input 1 ms for input 4 ms for input 12 ms for input
Discrete output logic	Positive logic (source)
Output voltage limits	30 V DC
Maximum current per output common	2 A with Q0Q3 for fast output 2 A with Q4Q7 for output 1 A with Q8Q9 for output
Maximum output frequency	20 kHz for fast output (PWM mode) 100 kHz for fast output (PLS mode) 1 kHz for output
Accuracy	+/- 0.1 % at 0.020.1 kHz for fast output +/- 1 % at 0.11 kHz for fast output
Maximum leakage current	5 μA for output
Maximum voltage drop	<1 V
Maximum tungsten load	<2.4 W
Protection type	Short-circuit protection Short-circuit and overload protection with automatic reset Reverse polarity protection for fast output
Reset time	10 ms automatic reset output 12 s automatic reset fast output
Memory capacity	64 MB for system memory RAM
Data backed up	128 MB built-in flash memory for backup of user programs
Data storage equipment	<= 16 GB SD card (optional)
Battery type	BR2032 lithium non-rechargeable, battery life: 4 year(s)
Backup time	2 years at 25 °C
Execution time for 1 KInstruction	0.3 ms for event and periodic task 0.7 ms for other instruction
Application structure	8 external event tasks 8 event tasks 3 cyclic master tasks + 1 freewheeling task 4 cyclic master tasks
Realtime clock	With
Clock drift	<= 60 s/month at 25 °C
Positioning functions	PTO function 4 channel(s) (positioning frequency: 100 kHz) PTO function 4 channel(s) for transistor output (positioning frequency: 1 kHz)
Counting input number	4 fast input (HSC mode) at 200 kHz 14 standard input at 1 kHz
Control signal type	A/B at 100 kHz for fast input (HSC mode) Pulse/direction at 200 kHz for fast input (HSC mode) Single phase at 200 kHz for fast input (HSC mode)
Integrated connection type	Non isolated serial link serial 1 with RJ45 connector and RS232/RS485 interface Non isolated serial link serial 2 with removable screw terminal block connector and RS485 interface USB port with mini B USB 2.0 connector Ethernet with RJ45 connector
Supply	(serial 1)serial link supply: 5 V, <200 mA
Transmission rate	1.2115.2 kbit/s (115.2 kbit/s by default) for bus length of 15 m for RS485 1.2115.2 kbit/s (115.2 kbit/s by default) for bus length of 3 m for RS232 480 Mbit/s for bus length of 3 m for USB 10/100 Mbit/s for Ethernet

Sthernet services FDR DHCP server via TM4 Ethernet switch network module DHCP client embedded Ethernet port SMS notifications Updating firmware SMIVP client/server Programming NGVL Monitoring IEC VAR ACCESS FTP client/server Downloading SUL client Modus (PP cignote IV 0 scanner	Communication port protocol	Non isolated serial link: Modbus master/slave
DHCP sener via TML Element switch network module DHCP client embedded Ethernet port SMS snifications Updating firmware SNMP client/server Programming NGVL Monitoring IEC VAR ACCESS FTP client/server Downloading SCU. client Modus TCP client I/O scanner Ethernet(P) conjunctor I/O scanner Ethernet(P) target, Modbus TCP server and Modbus TCP slave Send and receive email from the controller based on TCP/IJDP library Wise server (ViteDvisu & XVVets system) OPC I/O server DVS client 1 LED (green) for PWR 1 LED (green) for PWR 1 LED (green) for SL2 1 LED (green)	Port Ethernet	10BASE-T/100BASE-TX - 1 port(s) copper cable
DHCP client embedded Ethernet port SMS notifications Updating firmware SNMP client/server Programming NGVL Monitoring IEC VAR ACCESS FTP client/server Downloading SQL client Modous TQP client I/O scanner Ethernetipi Programming NGVL Monitoring IEC VAR ACCESS FTP client/server Downloading SQL client Modous TQP client I/O scanner Ethernetipi Programming NGVL Ethernetipi Programming NGVL Web server (WebVisu & XWeb ystem) OPC UA server DNS client I LED (green) for PWR I LED (green) for RIN I LED (green) for CRIN I LED (green) for GRIN I LED (green) for GRIN I LED (green) for SD card access (SD) I LED (green) for SD card access (SD) I LED (green) for SD card access (SD) I LED (green) for SS card access (SD) I LE	ethernet services	
SMS notifications Updating firmware SNMP client/server Programming NGVL Monitoring IEC VAR ACCESS FTP client/server Downloading SQL client Modous TCP client I/O scanner Etherner(IP) target, Modous TCP server and Modous TCP slave Sand and neaves email from the controller based on TCP/IJDP library Web server (VReVisu & XWeb system) OVPC IJA server DNS client 1 LED (green) for PUR 1 LED (green) for RUN 1 LED (green) for RUN 1 LED (green) for SD card access (SD) 1 LED (red) for I/O error (I/O) 1 LED (green) for SD card access (SD) 1 LED (red) for I/O error (I/O) 1 LED (green) for SD card access (SD) 1 LED (red) for I/O error (I/O) 1 LED (green) for SD card access (SD) 1 LED (red) for I/O error (I/O) 1 LED (green) for SL2 1 LED (green) for I/O error (I/O) 1 LED (green) for SL2 1 LED (green) for I/O error (I/O) 1 LED (green) for SL2 1 LED (green) for I/O error (I/O) 1 LED (green) for SL2 1 LED (green) for I/O error (I/O) 1 LED (green) for SL2 1 LED (green) for I/O state 1 LED (green) for SL2 1 LED (green) for I/O error (I/O) 1 LED (green) for I/O error (I/O) 1 LED (green) for SL2 1 LED (green) for I/O error (I/O) 1 LED (green) for SL2 1 LED (green) for I/O error (I/O) 1 LED (green) for SL2 1 LED (green) for I/O error (I/O) 1 LED (green) for I/O error (I/O) 1 LED (green) for SL2 1 LED (green) for I/O error (I/O) 1 LED		
Updating firmware SNMP client/server Programming NGVL Monitoring IEC VAR ACCESS FTP client/server Downloading SOL client Modbus TCP client I/O scanner Ethernetify originator Web server (Web/Sia X/Web system) OPC Ux server DON'S client 1 LED (green) for PWR 1 LED (green) for PWR 1 LED (green) for PWR 1 LED (green) for So Card access (SD) 1 LED (green) for So Card access (SD) 1 LED (green) for So Card access (SD) 1 LED (green) for IAI 1 LED (green)		·
SMMP client/server Programming NCVL Monitoring IEC VAR ACCESS FTP client-server Downloading SCJ client Modbus TCP client I/O scanner Ethernet/P client I/O scanner embedded Ethernet port Ethernet/P client I/O scanner		
Programming NoVL Montoring IEC VAR ACCESS FTP Cleint/server Downloading SGL client Modbus TCP client I/O scanner embedded Ethernet port Ethernet/IP originator I/O scanner IP originator I/O scanner IP originator IP or IP originator IP or IP originator IP or IP originator IP or IP originator IP originato		
Montoiring 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 originator I/O scanner Ethernet/IP originator I/O scanner Ethernet/IP or IP originator I/O scanner Ethernet/IP or IP originator I/O scanner IP originator I/O IP originator I		
IEC VAR ACCESS FTP Client IVO scanner		NGVL
FTP client/server Downloading SGL client Modbus TCP client I/O scanner embedded Ethernet port Ethernet/IP originator I/O scanner embedded Ethernet port Ethernet/IP originator I/O scanner embedded Ethernet port Ethernet/IP originator I/O scanner embedded Ethernet port Ethernet/IP praget, Modbus TCP server and Modbus TCP slave Sand and receive email from the controller based on TCP/UDP library Web server (Web/Visu & XWeb system) OPC UA server DNS client 1 LED (green) for PWR 1 LED (green) for PWR 1 LED (green) for FWR 1 LED (green) for SUC and access (SD) 1 LED (red) for I/O error (I/O) 1 LED (green) for SC card access (SD) 1 LED (gr		Monitoring
Downloading SOL client Modbus TCP client I/O scanner EthernetI/P iarget. 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 1 LED (green) for PWR 1 LED (green) for PWR 1 LED (green) for PWR 1 LED (green) for I/O) 1 LED (ed) for module error (ERR) 1 LED (green) for I/O) 1 LED (ed) for I/O or (I/O) 1 LED (green) for SL1 1 L		
SOL client Modbus TCP client I/O scanner Ethermet/IP originator I/O scanner embedded Ethernet port Ethermet/IP larget, Modbus TCP server and Modbus TCP slave Send and receive email from the controller based on TCP/UDP library Web server (WebNisu & XWeb system) OPC UA server DNS client 1 LED (green) for PWR 1 LED (green) for PWR 1 LED (green) for RUN 1 LED (green) for RUN 1 LED (green) for SD card access (SD) 1 LED (green) for SD card access (SD) 1 LED (green) for SL1 1 LED (green) for SL2 1 LED (green) for SL4 1 LED (green) for SL5 1 LED (green) for SL6 1 LED (green) for SL7 1 LED (green) for SL6 1 LED (green) for SL7 1 LED (green) for SL6 1 LED (green) for SL7 1 LED (green) for SL7 1 LED (green) for SL7 1 LED (green) for SL8 1 LED (gree		
Modbus TCP client I/O scanner		•
Ethernet/IP originator I/O scanner embedded Ethernet port Ethernet/IP larget, Modulus TCP server and Modus TCP slave Send and receive email from the controller based on TCP/UDP library Web server (WebN'su & XWeb system) OPC UA server DNS client 1 LED (green) for PWR 1 LED (green) for PWR 1 LED (green) for RUN 1 LED (green) for RUN 1 LED (green) for RUN 1 LED (green) for SD card access (SD) 1 LED (green) for SD card access (SD) 1 LED (green) for SL1 1 LED (green) for SL2 1 LED (g		
Ethernet/IP larget, 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 1 LED (green) for PWR 1 LED (green) for RUN 1 LED (red) for module error (ERR) 1 LED (red) for Model error (ERR) 1 LED (red) for Model error (ERR) 1 LED (green) for SL2 1 LED (red) for BAT 1 LED (green) for SL2 1 LED (red) for bus fauth on TM4 (TM4) 1 LED (green) for SL2 1 LED (red) for bus fauth or TM4 (TM4) 1 LED per channel (green) for I/O state 1 LED (green) for EMPER to the distance of the movable screw terminal blockfor connecting the 24 V DG power supply (pitch 5.08 mm) Maximum cable distance between Investigation of the server terminal blockfor connecting the 24 V DG power supply (pitch 5.08 mm) Maximum cable distance between Investigation of the server terminal blockfor connecting the 24 V DG power supply (pitch 5.08 mm) Maximum cable distance between Investigation of the server terminal blockfor connecting the 24 V DG power supply (pitch 5.08 mm) Maximum cable distance between Investigation of the server terminal blockfor connecting the 24 V DG power supply (pitch 5.08 mm) Maximum cable distance between Investigation of the server terminal blockfor connecting the 24 V DG power supply (pitch 5.08 mm) Maximum cable distance between output Shielded cable: <50 m for input Shielded cable: <50 m for input Shielded cable: <50 m for input Shielded cable: <50 m for putch Shielded cable: <50 m for supply and ground Between input and internal logic at 500 V AC Non-insulated between output and internal logic at 500 V AC Reviewen output and internal logic at 500 V AC Between state input and internal logic at 500 V AC Between state input and internal logic at 500 V AC Between state input and internal logic at 500 V AC Between state input and internal logic at 500 V AC Between state input and internal logic at 500 V AC Between state input		
Send and receive email from the controller based on TCP/UDP library Web server (WebVisua & XWeb system) OPC UA server DNS client 1 LED (green) for PWR 1 LED (green) for RUN 1 LED (green) for SD card access (SD) 1 LED (green) for SD card access (SD) 1 LED (green) for SD card access (SD) 1 LED (green) for SL1 1 LED (green) for SL1 1 LED (green) for SL2 1 LED (green) for SU card access (SD) 1 LED (green) for SU card acce		· · · · · · · · · · · · · · · · · · ·
OPC UA server DNS client 1 LED (green) for PWR 1 LED (green) for RWN 1 LED (green) for SD card access (SD) 1 LED (green) for SL1 1 LED (green) for SL1 1 LED (green) for SL1 1 LED (green) for SL2 1 LED (green) for SL3 1 LED (green) for SL4 1		
DNS client 1 LED (green) for PWR 1 LED (green) for RUN 1 LED (green) for SU access (SD) 1 LED (green) for SU access (green) for I/O state to TM4 (TM4) 1 LED per channel (green) for Library for I/O state to LED (green) for Element port activity 1 LED (green) for SU access (green) for I/O state to LED (green) for Element port activity 1 LED (green) for SU access (green) for I/O state to LED (green) for Element port activity 1 LED (green) for SU access (green) for I/O state to LED (green) for Element green for I/O state to LED (green) for Element green for I/O state to LED (green) for Element green for I/O state to LED (green) for Element green for I/O state to LED (green) for Element green for I/O state to LED (green) for I/O state to LED		Web server (WebVisu & XWeb system)
1 LED (green) for PWR 1 LED (green) for RUN 1 LED (green) for RUN 1 LED (green) for RUN 1 LED (green) for SD card access (SD) 1 LED (green) for SD card access (SD) 1 LED (green) for SL1 1 LED (green) for Elternet port activity 2 LED		OPC UA server
1 LED (green) for RUN 1 LED (red) for module error (ERR) 1 LED (red) for I/O error (I/O) 1 LED (green) for SD card access (SD) 1 LED (red) for BAT 1 LED (green) for SL1 1 LED (green) for SL1 1 LED (green) for SL2 1 LED (red) for BAT 1 LED (green) for SL2 1 LED (red) for bat 1 LED (green) for SL2 1 LED (green) for Ethernet port activity Removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting to Ec 61000 4-5 Non-insulated between input and internal logic at 500 V AC Non-insulated between input and internal logic at 500 V AC Non-insulated between output and internal logic at 500 V AC Non-insulated between output and internal logic at 500 V AC Non-insulated between output and internal logic at 500 V AC Non-insulated between output solve at 500 V AC Non-insulated between outp		DNS client
1 LED (green) for RUN 1 LED (red) for module error (ERR) 1 LED (red) for I/O error (I/O) 1 LED (green) for SD card access (SD) 1 LED (red) for BAT 1 LED (green) for SL1 1 LED (green) for SL1 1 LED (green) for SL2 1 LED (red) for BAT 1 LED (green) for SL2 1 LED (red) for bat 1 LED (green) for SL2 1 LED (green) for Ethernet port activity Removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting to Ec 61000 4-5 Non-insulated between input and internal logic at 500 V AC Non-insulated between input and internal logic at 500 V AC Non-insulated between output and internal logic at 500 V AC Non-insulated between output and internal logic at 500 V AC Non-insulated between output and internal logic at 500 V AC Non-insulated between output solve at 500 V AC Non-insulated between outp	Local signalling	1 LED (green) for PWR
1 LED (red) for Module error (ERR) 1 LED (red) for IV Derror (IVO) 1 LED (green) for SD card access (SD) 1 LED (green) for SD card access (SD) 1 LED (green) for SL1 1 LED (green) for SL1 1 LED (green) for SL1 1 LED (green) for SL2 1 LED (red) for bus fault on TM4 (TM4) 1 LED per channel (green) for IVO state 1 LED (green) for Ethernet port activity Temovable screw terminal blockfor inputs and outputs (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) Maximum cable distance between Inshielded cable: <50 m for input Shielded cable: <50 m for input Shielded cable: <30 m for output		
1 LED (red) for I/O error (I/O) 1 LED (green) for SD card access (SD) 1 LED (green) for SD card access (SD) 1 LED (green) for SD card access (SD) 1 LED (green) for SL1 1 LED (green) for SL2 1 LED (red) for bus fault on TM4 (TM4) 1 LED per channel (green) for I/O state 1 LED (green) for Ethernet port activity Electrical connection removable screw terminal blockfor inputs and outputs (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) removable screw terminal blockfor connection 4.00 mm) subled cable: <50 m for input subled cable: <50 m for input subled cable: <50 m for input subled cable connection and internal logic at 500 V AC subled cable connection and internal logic at 500 V AC subled cable connection and internal logic at 500 V AC subled cable connection and internal logic at 500 V AC subled cable connection mode conforming to IEC 61000-4-5 1 kV power lines (DC) differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV		
1 LED (red) for SAT 1 LED (green) for SL1 1 LED (green) for SL1 1 LED (red) for bus fault on TM4 (TM4) 1 LED per channel (green) for I/O state 1 LED (green) for SL2 1 LED (green) for Ethernet port activity removable screw terminal blockfor inputs and outputs (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) Waximum cable distance between devices Waximum cable distance between Unshielded cable: <50 m for input Shielded cable: <50 m for input Shielded cable: <50 m for output Unshielded cable: <50 m for output Shielded cable: <30 m for fast output Unshielded cable: <30 m for fast output nsulation Between supply and internal logic at 500 V AC Non-insulated between input and internal logic at 500 V AC Non-insulated between input and internal logic at 500 V AC Non-insulated between outputs Between output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between and internal logic at 500 V AC Between output groups at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Between output groups at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between outpu		
1 LED (green) for SL1 1 LED (green) for SL2 1 LED (green) for SL2 1 LED (green) for SL2 1 LED (green) for I/O state 1 LED (green) for I/O state 1 LED (green) for Ethernet port activity Electrical connection removable screw terminal blockfor inputs and outputs (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) Waximum cable distance between devices Unshielded cable: <50 m for input Unshielded cable: <50 m for fast input Unshielded cable: <50 m for fast input Unshielded cable: <50 m for output Shielded cable: <50 m for output Shielded cable: <50 m for output Shielded cable: <50 m for soutput Shielded cable: <50 m for output Shielded cable: <50 m for soutput S		1 LED (green) for SD card access (SD)
1 LED (green) for SL2 1 LED (red) for bus fault on TM4 (TM4) 1 LED per channel (green) for I/O state 1 LED (green) for Ethernet port activity removable screw terminal blockfor inputs and outputs (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) Waximum cable distance between devices Unshielded cable: <50 m for input Shielded cable: <50 m for output Shielded cable: <50 m for fast output Shielded cable: <50 m for fast output Shielded cable: <50 m for soutput Shielder cable: <50 m for soutput		1 LED (red) for BAT
1 LED (red) for bus fault on TM4 (TM4) 1 LED per channel (green) for I/O state 1 LED (green) for Ethernet port activity removable screw terminal blockfor inputs and outputs (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) Maximum cable distance between Unshielded cable: <50 m for input Shielded cable: <3 m for fast input Unshielded cable: <3 m for fast output Shielded cable: <3 m for fast output		
1 LED per channel (green) for I/O state 1 LED (green) for Ethernet port activity removable screw terminal blockfor inputs and outputs (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) Maximum cable distance between levices Unshielded cable: <50 m for input Shielded cable: <50 m for input Shielded cable: <50 m for output Shielded cable: <30 m for output Shielded cable: <30 m for fast output nsulation Between supply and internal logic at 500 V AC Non-insulated between supply and ground Between inputs Between inputs Between output and internal logic at 500 V AC Non-insulated between outputs Between output and internal logic at 500 V AC Non-insulated between outputs Between output and internal logic at 500 V AC Non-insulated between outputs Between output and internal logic at 500 V AC Setween fast output and internal logic at 500 V AC Between output groups at 500 V AC Between output on internal logic at 500 V AC Between output groups at 500 V AC Between output internal logic at 500 V AC Between output groups at 500 V AC Between fast input groups at 500 V AC Between fast input groups at 500 V AC B		
### Title Description of a compaction Temporal activity		
Electrical connection removable screw terminal blockfor inputs and outputs (pitch 5.08 mm) removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) Maximum cable distance between devices Unshielded cable: <50 m for input Shielded cable: <50 m for fast input Unshielded cable: <50 m for output Shielded cable: <50 m for output Shielded cable: <50 m for output Shielded cable: <50 m for fast output Between supply and internal logic at 500 V AC Non-insulated between input and internal logic at 500 V AC Non-insulated between input and internal logic at 500 V AC Non-insulated between outputs and internal logic at 500 V AC Non-insulated between outputs and internal logic at 500 V AC Between output and internal logic at 500 V AC Between output and internal logic at 500 V AC Between output groups at 500 V AC Between output		· · · · · · · · · · · · · · · · · · ·
removable screw terminal blockfor connecting the 24 V DC power supply (pitch 5.08 mm) Maximum cable distance between devices Unshielded cable: <50 m for input Shielded cable: <50 m for output Unshielded cable: <50 m for output Shielded cable: <3 m for fast input Unshielded cable: <3 m for fast output Inshielded Cable: <4 m for		TEED (groun) for Euromot port activity
Maximum cable distance between levices Unshielded cable: <50 m for input Shielded cable: <50 m for input Unshielded cable: <50 m for fast input Unshielded cable: <50 m for output Shielded cable company and ground Between input Shielded cable output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Shielded cable: Shielded:	Electrical connection	
Shielded cable: <10 m for fast input Unshielded cable: <50 m for output Shielded cable: <3 m for fast output Shielded cable: <3 m for fast output Between supply and internal logic at 500 V AC Non-insulated between supply and ground Between input and internal logic at 500 V AC Non-insulated between inputs Between fast input and internal logic at 500 V AC Between output and internal logic at 500 V AC Between output and internal logic at 500 V AC Between output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Retween output groups at 500 V AC Between		
Shielded cable: <10 m for fast input Unshielded cable: <50 m for output Shielded cable: <3 m for fast output Shielded cable: <3 m for fast output Between supply and internal logic at 500 V AC Non-insulated between supply and ground Between input and internal logic at 500 V AC Non-insulated between inputs Between fast input and internal logic at 500 V AC Between output and internal logic at 500 V AC Between output and internal logic at 500 V AC Between output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Retween output groups at 500 V AC Between	Maximum cable distance between	Linshielded cable: <50 m for input
Shielded cable: <3 m for fast output Between supply and internal logic at 500 V AC Non-insulated between supply and ground Between input and internal logic at 500 V AC Non-insulated between inputs Between fast input and internal logic at 500 V AC Non-insulated between inputs Between output and internal logic at 500 V AC Between output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between output groups at 500 V AC Be	devices	·
Between supply and internal logic at 500 V AC Non-insulated between supply and ground Between input and internal logic at 500 V AC Non-insulated between inputs Between fast input and internal logic at 500 V AC Between output and internal logic at 500 V AC Between output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Marking CE Surge withstand 1 kV power lines (DC) common mode conforming to IEC 61000-4-5 1 kV shielded cable common mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to		Unshielded cable: <50 m for output
Non-insulated between supply and ground Between input and internal logic at 500 V AC Non-insulated between inputs Between fast input and internal logic at 500 V AC Between output and internal logic at 500 V AC Between output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Marking CE Surge withstand 1 kV power lines (DC) common mode conforming to IEC 61000-4-5 1 kV shielded cable common mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor ou		Shielded cable: <3 m for fast output
Non-insulated between supply and ground Between input and internal logic at 500 V AC Non-insulated between inputs Between fast input and internal logic at 500 V AC Between output and internal logic at 500 V AC Non-insulated between outputs Between fast input and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Between output groups at 500 V AC Marking CE Surge withstand 1 kV power lines (DC) common mode conforming to IEC 61000-4-5 1 kV shielded cable common mode conforming to IEC 61000-4-5 0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 610	Insulation	Between supply and internal logic at 500 V AC
Between input and internal logic at 500 V AC Non-insulated between inputs Between fast input and internal logic at 500 V AC Between output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC		
Between fast input and internal logic at 500 V AC Between output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Between fast output and internal logic at 500 V AC Between output groups at 500 V AC Marking CE Surge withstand 1 kV power lines (DC) common mode conforming to IEC 61000-4-5 1 kV shielded cable common mode conforming to IEC 61000-4-5 0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC		
Between output and internal logic at 500 V AC Non-insulated between outputs Between fast output and internal logic at 500 V AC Between fast output and internal logic at 500 V AC Between output groups at 500 V AC marking CE Surge withstand 1 kV power lines (DC) common mode conforming to IEC 61000-4-5 1 kV shielded cable common mode conforming to IEC 61000-4-5 0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 Web services Web server Waximum 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		Non-insulated between inputs
Non-insulated between outputs Between fast output and internal logic at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Between output groups at 500 V AC Between output gomen mode conforming to IEC 61000-4-5 1 kV shielded cable common mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 Web services Web server 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:		
Between fast output and internal logic at 500 V AC Between output groups at 500 V AC marking CE Surge withstand 1 kV power lines (DC) common mode conforming to IEC 61000-4-5 1 kV shielded cable common mode conforming to IEC 61000-4-5 0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to		
Between output groups at 500 V AC Marking CE Surge withstand 1 kV power lines (DC) common mode conforming to IEC 61000-4-5 1 kV shielded cable common mode conforming to IEC 61000-4-5 0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 Web services Web server Waximum 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:		· · · · · · · · · · · · · · · · · · ·
The server of server device(s) CE Surge withstand 1 kV power lines (DC) common mode conforming to IEC 61000-4-5 1 kV shielded cable common mode conforming to IEC 61000-4-5 0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 Web services Web server Waximum 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:		
Surge withstand 1 kV power lines (DC) common mode conforming to IEC 61000-4-5 1 kV shielded cable common mode conforming to IEC 61000-4-5 0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 Web services Web server Waximum 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:		Between output groups at 500 v AC
1 kV shielded cable common mode conforming to IEC 61000-4-5 0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 Web services Web server Web server 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:	marking	CE
0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5 1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 Web services Web server 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:	Surge withstand	
1 kV relay output differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to 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:		1 kV shielded cable common mode conforming to IEC 61000-4-5
1 kV input common mode conforming to IEC 61000-4-5 1 kV transistor output common mode conforming to IEC 61000-4-5 Web services Web server 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:		
1 kV transistor output common mode conforming to IEC 61000-4-5 Web services Web server 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		
Web services Web server 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:		
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		· · · · · · · · · · · · · · · · · · ·
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	web services	vved server
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	Maximum number of connections	
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		·
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		
8 Modbus client Number of server device(s) 64 Modbus TCP: 16 EtherNet/IP: Cycle time 10 ms 16 EtherNet/IP		
16 EtherNet/IP: Cycle time 10 ms 16 EtherNet/IP		· · · · · · · · · · · · · · · · · · ·
Cycle time 10 ms 16 EtherNet/IP	Number of server device(s)	64 Modbus TCP:
·		16 EtherNet/IP:
64 ms 64 Modbus TCP	Cycle time	10 ms 16 EtherNet/IP
		64 mg 64 Madhua TCD

Mounting support	Top hat type TH35-15 rail conforming to IEC 60715 Top hat type TH35-7.5 rail conforming to IEC 60715 plate or panel with fixing kit
Height	90 mm
Depth	95 mm
Width	150 mm
Net weight	0.53 kg

Environment

Environment	
Standards	ANSI/ISA 12-12-01 CSA C22.2 No 142 CSA C22.2 No 213 IEC 61131-2:2007 Marine specification (LR, ABS, DNV, GL) UL 508
product certifications	RCM cULus CE UKCA DNV-GL ABS LR
Resistance to electrostatic discharge	8 kV in air conforming to IEC 61000-4-2 4 kV on contact conforming to IEC 61000-4-2
Resistance to electromagnetic fields	10 V/m 80 MHz1 GHz conforming to IEC 61000-4-3 3 V/m 1.4 GHz2 GHz conforming to IEC 61000-4-3 1 V/m 2 GHz3 GHz conforming to IEC 61000-4-3
Resistance to fast transients	2 kV (power lines) conforming to IEC 61000-4-4 1 kV (Ethernet line) conforming to IEC 61000-4-4 1 kV (serial link) conforming to IEC 61000-4-4 1 kV (input) conforming to IEC 61000-4-4 1 kV (transistor output) conforming to IEC 61000-4-4
Resistance to conducted disturbances	10 V 0.1580 MHz conforming to IEC 61000-4-6 3 V 0.180 MHz conforming to 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) conforming to Marine specification (LR, ABS, DNV, GL)
Electromagnetic emission	Conducted emissions - test level: 12069 dBμV/m QP (power lines) at 10150 kHz conforming to IEC 55011 Conducted emissions - test level: 63 dBμV/m QP (power lines) at 1.530 MHz conforming to IEC 55011 Radiated emissions - test level: 40 dBμV/m QP class A at 30230 MHz conforming to IEC 55011 Conducted emissions - test level: 7963 dBμV/m QP (power lines) at 1501500 kHz conforming to IEC 55011 Radiated emissions - test level: 47 dBμV/m QP class A at 2301000 MHz conforming to IEC 55011
Immunity to microbreaks	10 ms
Ambient air temperature for operation	-1050 °C (vertical installation) -1055 °C (horizontal installation)
Ambient air temperature for storage	-2570 °C
Relative humidity	1095 %, without condensation (in operation) 1095 %, without condensation (in storage)
IP degree of protection	IP20 with protective cover in place
Pollution degree	2
Operating altitude	02000 m
Storage altitude	03000 m

Vibration resistance	3.5 mm at 58.4 Hz on symmetrical rail 3 gn at 8.4150 Hz on symmetrical rail 3.5 mm at 58.4 Hz on panel mounting 3 gn at 8.4150 Hz on panel mounting
Shock resistance	15 gn for 11 ms

Packing Units

•	
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	11.33 cm
Package 1 Width	13.095 cm
Package 1 Length	18.689 cm
Package 1 Weight	640.0 g
Unit Type of Package 2	S03
Number of Units in Package 2	8
Package 2 Height	30 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	5.801 kg
Unit Type of Package 3	P06
Number of Units in Package 3	64
Package 3 Height	75.0 cm
Package 3 Width	40.0 cm
Package 3 Length	80.0 cm
Package 3 Weight	58.4 kg



Green PremiumTM **label** is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >





Transparency RoHS/REACh

Well-being performance

Ø	Mercury Free	
	Rohs Exemption Information	Yes
②	Pvc Free	

Certifications & Standards

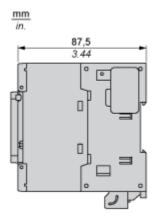
Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information

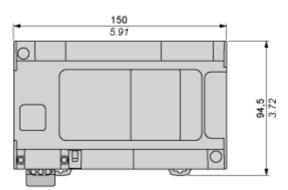
Product datasheet

TM241CE24T

Dimensions Drawings

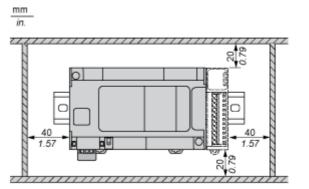
Dimensions

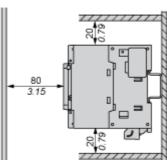




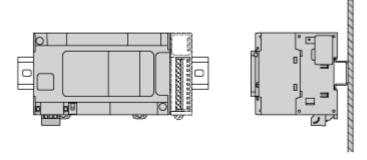
Mounting and Clearance

Clearance

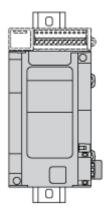




Mounting Position

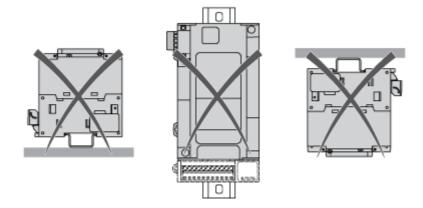


Acceptable Mounting



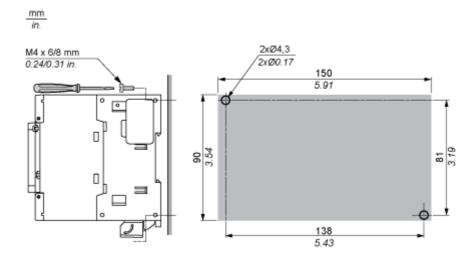
NOTE: Expansion modules must be mounted above the logic controller.

Incorrect Mounting



Direct Mounting On a Panel Surface

Mounting Hole Layout

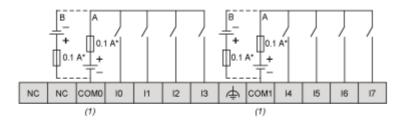


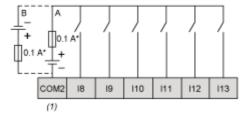
TM241CE24T

Connections and Schema

Digital Inputs

Wiring Diagram





(*): Type T fuse

(1): The COM0, COM1 and COM2 terminals are not connected internally

(A): Sink wiring (positive logic)

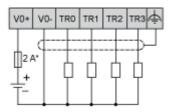
(B): Source wiring (negative logic)

Fast Input Wiring (I0...I7)



Fast Transistor Outputs

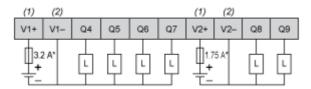
Wiring Diagram



(*): 2 A fast-blow fuse

Transistor Outputs

Wiring Diagram

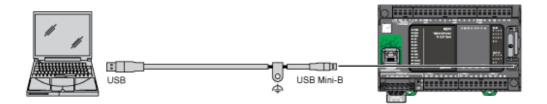


(*): Type T fuse

(1): The V1+ and V2+ terminals are not connected internally.

(2): The V1- and V2- terminals are not connected internally.

USB Mini-B Connection



Ethernet Connection to a PC

