



Main

Range of product	Modicon M258
Product or component type	Logic controller
Product specific application	-
Discrete I/O number	42
Analogue input number	4
Discrete output number	4 for fast output 12 for output

Complementary

Discrete input number	4 for regular input 12 for input 10 for fast input
Discrete input logic	Source for input Sink for regular input Sink for fast input
Discrete input voltage	24 V
Discrete input voltage type	DC
Analogue input type	Voltage +/- 10 V Current 4...20 mA Current 0...20 mA
Analogue input resolution	12 bits
Voltage state1 guaranteed	>= 15 V for regular input >= 15 V for fast output >= 15 V for fast input
Current state 1 guaranteed	>= 2 mA for regular input >= 2 mA for fast output >= 2 mA for fast input
Voltage state 0 guaranteed	<= 5 V for regular input <= 5 V for fast output <= 5 V for fast input
Current state 0 guaranteed	<= 1.5 mA for regular input <= 1.5 mA for fast output <= 1.5 mA for fast input
Discrete input current	4 mA for regular input 4 mA for fast input
Input impedance	6 kOhm for regular input 6 kOhm for fast input
Configurable filtering time	4 ms for fast input/regular input and fast output 12 ms for fast input/regular input and fast output 1.5 ms for fast input/regular input and fast output 0 ms for fast input/regular input and fast output
Anti bounce filtering	2 µs...4 ms (configurable)fast input/regular input and fast output
Cable length	<= 30 m regular input <= 30 m fast output <= 30 m fast input
Isolation between channels and internal logic	500 Vrms AC
Isolation between channels	None
Discrete output logic	Source
Discrete output voltage	24 V DC
Output voltage limits	19.2...28.8 V

Discrete output current	4 mA for fast output
[Us] rated supply voltage	24 V DC for main supply 24 V DC for I/O power segment 24 V DC for embedded expert modules power
Supply voltage limits	20.4...28.8 V
[In] rated current	10 A for I/O power segment 0.31 A for main supply 0.04 A for embedded expert modules power
Peak current	1.2 A during > 70 s main supply <= 50 kA during <= 150 s embedded expert modules power <= 25 kA during <= 500 s I/O power segment <= 100 kA during <= 70 s main supply
Power consumption	<= 14.14 W
Execution time per instruction	Boolean: 22 ns
Memory description	Internal RAM 64 MB Flash 128 MB
Realtime clock	Without any user calibration realtime clock, drift: < 30 s/month at 25 °C With user calibration realtime clock, drift: <= 6 s/month
Data backed up	Variables of type retain and retain persistent CR2477M Renata, 1.5 years autonomy
Integrated connection type	2 free slots PCI 1 isolated serial link USB type A, 480 Mbit/s 1 isolated serial link mini B USB, 480 Mbit/s 1 isolated serial link female RJ45, Modbus master/slave RTU/ASCII or character mode ASCII (RS232/RS485), 300...115200 bps 1 isolated serial link female RJ45, Ethernet Modbus TCP/IP slave (10BASE-T/100BASE-TX) 1 CANopen male SUB-D 9, CANopen master
Transmission rate	800 kbit/s for bus length of 25 m, CANopen 20 kbit/s for bus length of 2500 m, CANopen 1000 kbit/s for bus length of 4 m, CANopen 10 kbit/s for bus length of 5000 m, CANopen 500 kbit/s for bus length of 100 m, CANopen 50 kbit/s for bus length of 1000 m, CANopen 250 kbit/s for bus length of 250 m, CANopen 125 kbit/s for bus length of 500 m, CANopen
Counting input number	8 counting input(s) 200 kHz
Local signalling	1 LED red for BATT (battery status) 1 LED green/yellow for Eth LA (Ethernet activity) 1 LED green/red for USB host 1 LED green/red for RUN/MS (module status) 1 LED green/red for Eth ST (Ethernet status) 1 LED green/red for Eth NS (Ethernet network status) 1 LED green/red for APP1 1 LED green/red for APP0 1 LED for MBS COM 1 LED for CAN0 STS 1 LED per channel for I/O state
Marking	CE
Mounting support	Symmetrical DIN rail
Width	237.5 mm
Height	99 mm
Depth	85 mm
Product weight	0.77 kg

Environment





Standards	CSA 22-2 No 142 IEC 61131-2 UL 508 CSA 22-2 No 213
Product certifications	CSA C-Tick CULus GOST-R
Ambient air temperature for operation	0...60 °C with derating factorhorizontal installation 0...55 °C without derating factorhorizontal installation 0...50 °C vertical installation
Ambient air temperature for storage	-25...70 °C
Relative humidity	5...95 % without condensation
IP degree of protection	IP20 conforming to IEC 61131-2
Pollution degree	2 conforming to IEC 60664
Operating altitude	0...2000 m
Storage altitude	0...3000 m
Vibration resistance	3.5 mm 5...8.4 Hz DIN rail 1 gn 8.4...150 Hz DIN rail
Shock resistance	15 gn for 11 ms
Resistance to electrostatic discharge	8 kV in air conforming to EN/IEC 61000-4-2 4 kV on contact conforming to EN/IEC 61000-4-2
Resistance to electromagnetic fields	10 V/m 80...2000 MHz conforming to EN/IEC 61000-4-3 1 V/m 2...2.7 GHz conforming to EN/IEC 61000-4-3
Resistance to fast transients	2 kV power lines conforming to EN/IEC 61000-4-4 1 kV shielded cable conforming to EN/IEC 61000-4-4 1 kV I/O conforming to EN/IEC 61000-4-4
Surge withstand	1 kV common mode conforming to EN/IEC 61000-4-5 0.5 kV differential mode conforming to EN/IEC 61000-4-5
Disturbance radiated/conducted	CISPR11

Dimensions



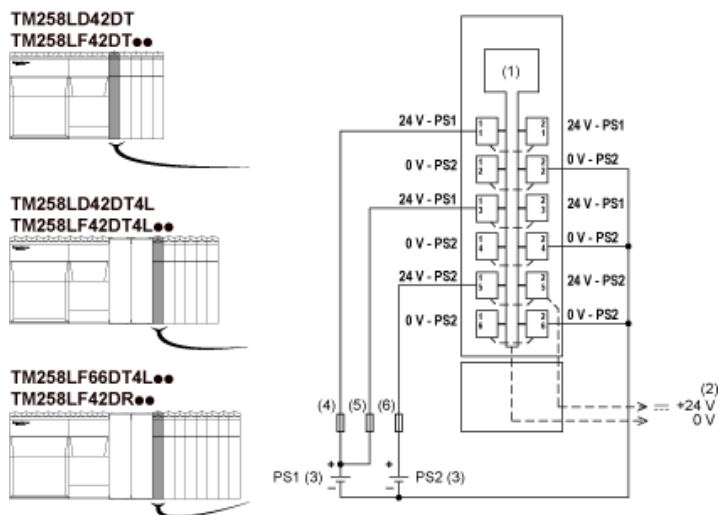
TM5 System Wiring Recommendations

Wire Sizes to Use with Removable Spring Terminal Blocks

mm in.				
mm ²	0,08...2,5	0,25...2,5	0,25...1,5	2 x 0,25...2 x 0,75
AWG	28...14	24...14	24...16	2 x 24...2 x 18

External Power Supplies

Wiring Diagram of the Controller Power Distribution Module



- (1) Internal electronics
- (2) 24 Vdc I/O power segment integrated into the bus bases
- (3) PS1/PS2: External isolated SELV power supply 24 Vdc
- (4) External fuse, Type T slow-blow, 3 A 250 V
- (5) External fuse, Type T slow-blow, 2 A 250 V
- (6) External fuse, Type T slow-blow, 10 A max., 250 V