



Main

Range of product	Modicon M258
Product or component type	Logic controller
Product specific application	-
Discrete I/O number	42
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
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 0.26 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	<= 13.03 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	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	175 mm
Height	99 mm
Depth	85 mm
Product weight	0.55 kg

Environment

Standards	CSA C22.2 No 142 IEC 61131-2 UL 508 CSA C22.2 No 213
Product certifications	CSA C-Tick CULus GOST-R
Ambient air temperature for operation	0...60 °C with derating factor horizontal installation 0...55 °C without derating factor horizontal 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

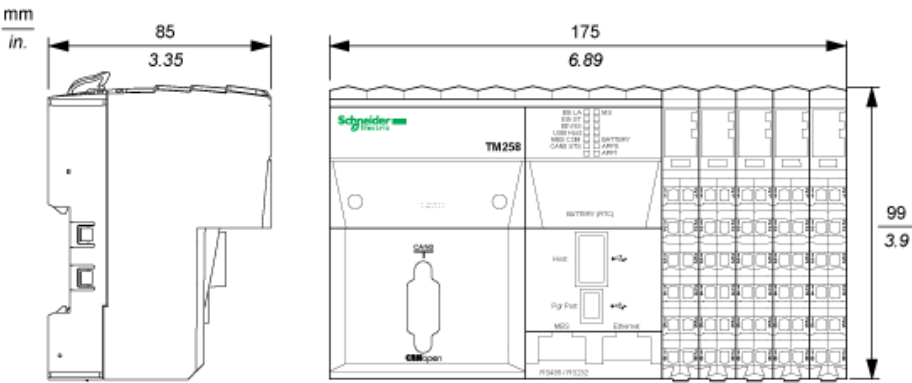
Pollution degree	2 conforming to IEC 60664
Operating altitude	0...2000 m
Storage altitude	0...3000 m
Vibration resistance	3.5 mm 5...8.4 Hz DIN rail 1 gn 8.4...150 Hz DIN rail
Shock resistance	15 gn for 11 ms
Resistance to electrostatic discharge	8 kV in air conforming to EN/IEC 61000-4-2 4 kV on contact 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	CISPR 11

Offer Sustainability

Sustainable offer status	Green Premium product
Product environmental profile	Available  Download Product Environmental
Product end of life instructions	Available  Download End Of Life Manual

Controller

Dimensions



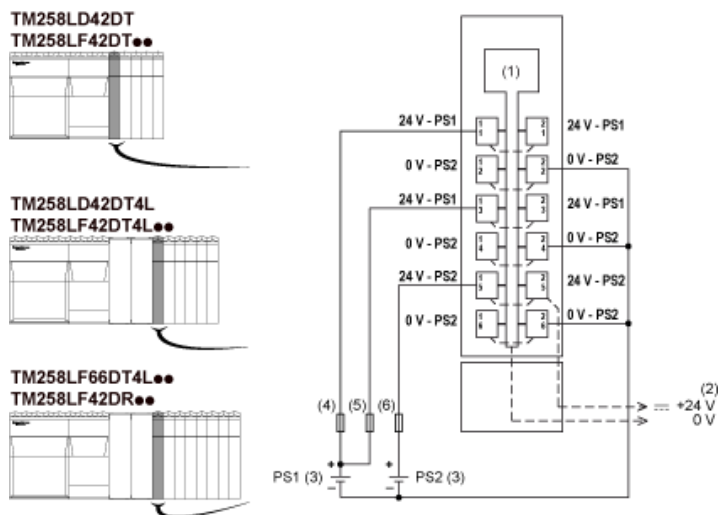
TM5 System Wiring Recommendations

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