

# Product data sheet

Specifications



## Logic controller, Modicon M258, compact base 42 + 4 I/O, 24 V DC

TM258LD42DT4L

### 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	12 output 4 fast output

### Complementary

Discrete input number	10 for fast input 12 for input 4 for regular input
Discrete input logic	Sink for fast input Sink for regular input Source for input
Discrete input voltage	24 V
Discrete input voltage type	DC
Analogue input type	Current: 0...20 mA Current: 4...20 mA Voltage: +/- 10 V
Analogue input resolution	12 bits
Voltage state 1 guaranteed	>= 15 V for fast input >= 15 V for fast output >= 15 V for regular input
Voltage state 0 guaranteed	<= 5 V for fast input <= 5 V for fast output <= 5 V for regular input
Discrete input current	4 mA for fast input 4 mA for regular input
Input impedance	6 kOhm for fast input 6 kOhm for regular input
Configurable filtering time	0 ms for fast input/regular input and fast output 1.5 ms for fast input/regular input and fast output 12 ms for fast input/regular input and fast output 4 ms for fast input/regular input and fast output
Anti bounce filtering	2 µs...4 ms configurable fast input/regular input and fast output
Maximum cable distance between devices	<30 m for fast input <30 m for fast output <30 m for regular input

<b>Isolation between channels and internal logic</b>	500 Vrms AC
<b>Isolation between channels</b>	None
<b>Discrete output logic</b>	Source
<b>Discrete output voltage</b>	24 V DC
<b>Output voltage limits</b>	19.2...28.8 V
<b>Discrete output current</b>	4 mA for fast output
<b>[Us] rated supply voltage</b>	24 V DC for embedded expert modules power 24 V DC for I/O power segment 24 V DC for main supply
<b>Supply voltage limits</b>	20.4...28.8 V
<b>[In] rated current</b>	0.04 A for embedded expert modules power 10 A for I/O power segment 0.31 A for main supply
<b>Peak current</b>	100 kA (duration = <= 70 s) for main supply 25 kA (duration = <= 500 s) for I/O power segment 50 kA (duration = <= 150 s) for embedded expert modules power 1.2 A (duration = > 70 s) for main supply
<b>Power consumption in W</b>	14.14 W
<b>Memory description</b>	Flash 128 MB Internal RAM 64 MB
<b>Realtime clock</b>	Without any user calibration clock, clock drift < 30 s/month at 25 °C With user calibration clock, clock drift <= 6 s/month
<b>Data backed up</b>	Variables of type retain and retain persistent CR2477M Renata, 1.5 years autonomy
<b>Integrated connection type</b>	1 isolated serial link with female RJ45 connectorModbus with master/slave RTU/ASCII or character mode ASCII, physical interface: RS232/RS485, transmission rate: 300...115200 bps 1 isolated serial link with female RJ45 connectorEthernet Modbus TCP/IP with slave, physical interface: 10BASE-T/100BASE-TX 1 isolated serial link with mini B USB connector, transmission rate: 480 Mbit/s 1 isolated serial link with USB type A connector, transmission rate: 480 Mbit/s 2 free slots PCI
<b>Counting input number</b>	8 counting input(s) at 200 kHz
<b>Local signalling</b>	1 LED per channel for I/O state 1 LED for CAN0 STS 1 LED for MBS COM 1 LED green/red for APP0 1 LED green/red for APP1 1 LED green/red for Eth NS (Ethernet network status) 1 LED green/red for Eth ST (Ethernet status) 1 LED green/red for RUN/MS (module status) 1 LED green/red for USB host 1 LED green/yellow for Eth LA (Ethernet activity) 1 LED red for BATT (battery status)
<b>Marking</b>	CE
<b>Mounting support</b>	Symmetrical DIN rail
<b>Width</b>	237.5 mm
<b>Height</b>	99 mm
<b>Depth</b>	85 mm
<b>Product weight</b>	0.77 kg
<b>Environment</b>	
<b>Standards</b>	IEC 61131-2 CSA C22.2 No 213 CSA C22.2 No 142 UL 508
<b>Product certifications</b>	cULus CSA GOST-R C-Tick
<b>Ambient air temperature for operation</b>	0...55 °C without derating (horizontal installation) 0...60 °C with derating factor (horizontal installation) 0...50 °C (vertical installation)

<b>Ambient air temperature for storage</b>	-25...70 °C
<b>Relative humidity</b>	5...95 % without condensation
<b>IP degree of protection</b>	IP20 conforming to IEC 61131-2
<b>Pollution degree</b>	2 conforming to IEC 60664
<b>Operating altitude</b>	0...2000 m
<b>Storage altitude</b>	0...3000 m
<b>Vibration resistance</b>	1 gn at 8.4...150 Hz on DIN rail 3.5 mm at 5...8.4 Hz on DIN rail
<b>Shock resistance</b>	15 gn for 11 ms
<b>Resistance to electrostatic discharge</b>	4 kV on contact conforming to EN/IEC 61000-4-2 8 kV in air conforming to EN/IEC 61000-4-2
<b>Resistance to electromagnetic fields</b>	1 V/m 2...2.7 GHz conforming to EN/IEC 61000-4-3 10 V/m 80...2000 MHz conforming to EN/IEC 61000-4-3
<b>Resistance to fast transients</b>	1 kV (I/O) conforming to EN/IEC 61000-4-4 1 kV (shielded cable) conforming to EN/IEC 61000-4-4 2 kV (power lines) conforming to EN/IEC 61000-4-4
<b>Surge withstand</b>	0.5 kV differential mode conforming to EN/IEC 61000-4-5 1 kV common mode conforming to EN/IEC 61000-4-5
<b>Disturbance radiated/ conducted</b>	CISPR 11

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	13.3 cm
<b>Package 1 Width</b>	15.6 cm
<b>Package 1 Length</b>	37.0 cm
<b>Package 1 Weight</b>	924.0 g
<b>Unit Type of Package 2</b>	S04
<b>Number of Units in Package 2</b>	6
<b>Package 2 Height</b>	30.0 cm
<b>Package 2 Width</b>	40.0 cm
<b>Package 2 Length</b>	60.0 cm
<b>Package 2 Weight</b>	6.259 kg

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>REACH free of SVHC</b>	Yes
<b>EU RoHS Directive</b>	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
<b>Toxic heavy metal free</b>	Yes
<b>Mercury free</b>	Yes
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>

---

<b>WEEE</b>	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
<b>PVC free</b>	Yes
<b>California proposition 65</b>	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>

---

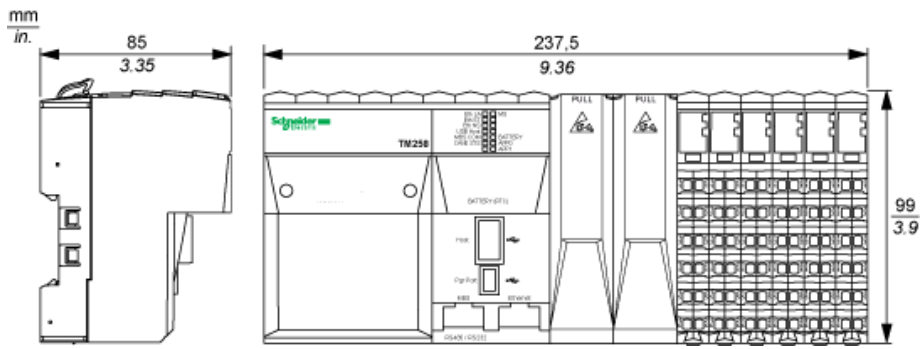
## **Contractual warranty**

---

<b>Warranty</b>	18 months
-----------------	-----------

Controller





Dimensions



**TM5 System Wiring Recommendations**

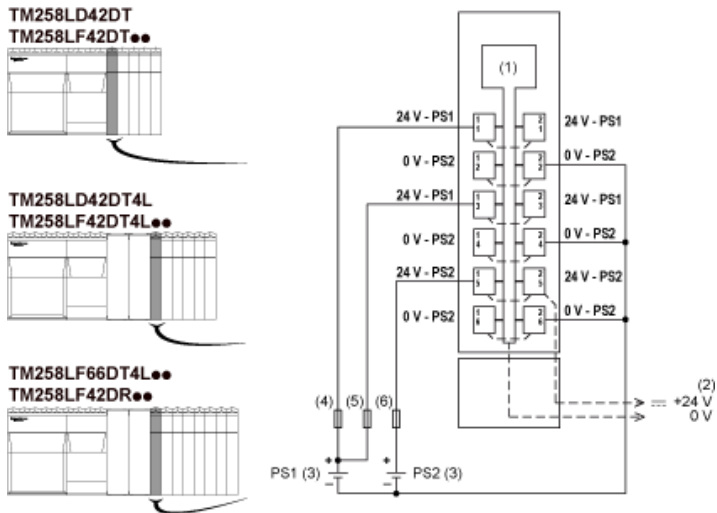
---

**Wire Sizes to Use with Removable Spring Terminal Blocks**

mm /in.				
mm <sup>2</sup>	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

Recommended replacement(s)