

# Product datasheet

Specifications



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

TM258LF42DT

### Main

Range of product	Modicon M258
Product or component type	Logic controller
Product specific application	-
Discrete I/O number	42
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
Voltage state 1 guaranteed	$\geq 15$ V for fast input $\geq 15$ V for fast output $\geq 15$ V for regular input
Voltage state 0 guaranteed	$\leq 5$ V for fast input $\leq 5$ V for fast output $\leq 5$ 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 $\mu$ s...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
Isolation between channels and internal logic	500 Vrms AC
Isolation between channels	None
Discrete output logic	Source
Discrete output voltage	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 0.26 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>	13.03 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 1 CANopen with male SUB-D 9 connectorCANopen with master
<b>Transmission rate</b>	125 kbit/s for bus length of 500 m for CANopen 250 kbit/s for bus length of 250 m for CANopen 50 kbit/s for bus length of 1000 m for CANopen 500 kbit/s for bus length of 100 m for CANopen 10 kbit/s for bus length of 5000 m for CANopen 1000 kbit/s for bus length of 4 m for CANopen 20 kbit/s for bus length of 2500 m for CANopen 800 kbit/s for bus length of 25 m for CANopen
<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>	175 mm
<b>Height</b>	99 mm
<b>Depth</b>	85 mm
<b>Net weight</b>	0.55 kg
<b>Environment</b>	
<b>Standards</b>	UL 508 CSA C22.2 No 142 IEC 61131-2 CSA C22.2 No 213
<b>Product certifications</b>	GOST-R cULus C-Tick CSA
<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>	13.5 cm
<b>Package 1 Width</b>	15.6 cm
<b>Package 1 Length</b>	31.0 cm
<b>Package 1 Weight</b>	778.0 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>	5.426 kg

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<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>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>

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



<b>Warranty</b>	18 months
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**TM5 System Wiring Recommendations**

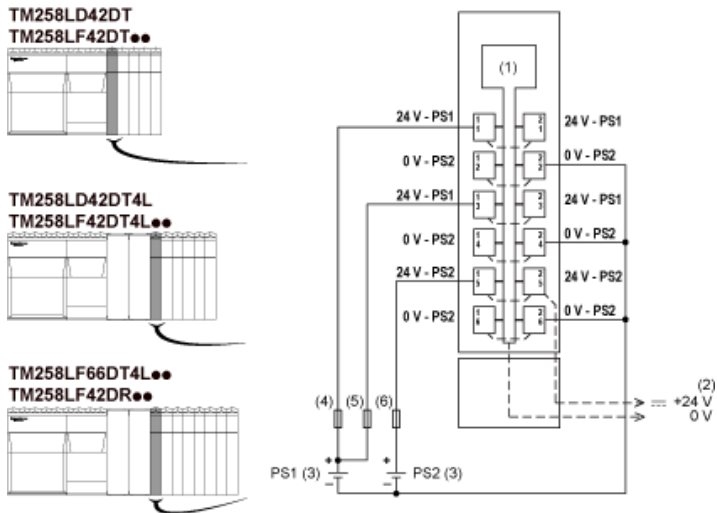
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**Wire Sizes to Use with Removable Spring Terminal Blocks**

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)**