

# Product datasheet

Specifications



logic controller, Modicon M258,  
compact base, 42 IO, 24V DC

TM258LD42DT

## 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
Output voltage limits	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 0.25 A for main supply 10 A for I/O power segment
<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 connector Modbus 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 connector Ethernet 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
<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>	0.5 kg

## Environment

<b>Standards</b>	CSA C22.2 No 142 UL 508 IEC 61131-2 CSA C22.2 No 213
<b>product certifications</b>	C-Tick CSA cULus GOST-R
<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 IEC 61000-4-2 8 kV in air conforming to IEC 61000-4-2
<b>Resistance to electromagnetic fields</b>	1 V/m 2...2.7 GHz conforming to IEC 61000-4-3 10 V/m 80...2000 MHz conforming to IEC 61000-4-3
<b>Resistance to fast transients</b>	1 kV (I/O) conforming to IEC 61000-4-4 1 kV (shielded cable) conforming to IEC 61000-4-4 2 kV (power lines) conforming to IEC 61000-4-4
<b>Surge withstand</b>	0.5 kV differential mode conforming to IEC 61000-4-5 1 kV common mode conforming to 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>	13.000 cm
<b>Package 1 Width</b>	15.500 cm
<b>Package 1 Length</b>	31.500 cm
<b>Package 1 Weight</b>	766.000 g
<b>Unit Type of Package 2</b>	S04
<b>Number of Units in Package 2</b>	6
<b>Package 2 Height</b>	30.000 cm
<b>Package 2 Width</b>	40.000 cm
<b>Package 2 Length</b>	60.000 cm
<b>Package 2 Weight</b>	5.534 kg

## Contractual warranty

<b>Warranty</b>	18 months
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## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> 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 >](#)

## Well-being performance

✓ Toxic Heavy Metal Free

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✓ Mercury Free

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✓ Rohs Exemption Information [Yes](#)

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✓ Pvc Free

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**Reach Regulation** [REACH Declaration](#)

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**Eu Rohs Directive** Pro-active compliance (Product out of EU RoHS legal scope)

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**China Rohs Regulation** [China RoHS declaration](#)

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**Weee** The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

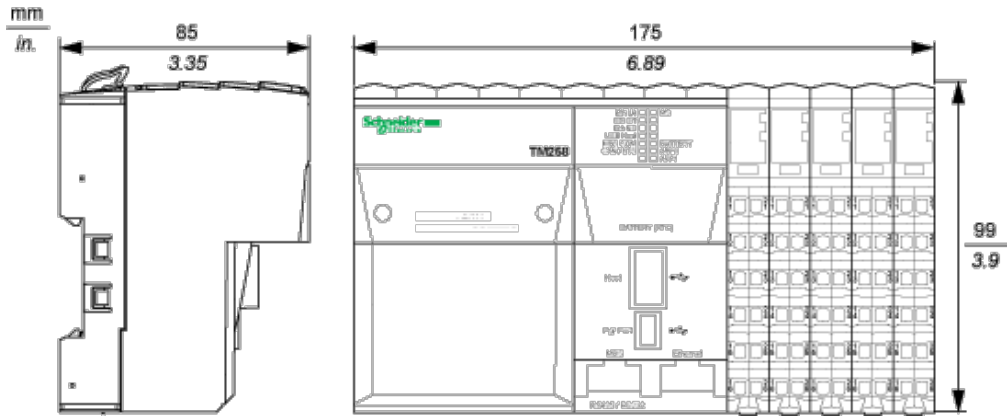
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Dimensions Drawings

Controller

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Dimensions








Connections and Schema

**TM5 System Wiring Recommendations**

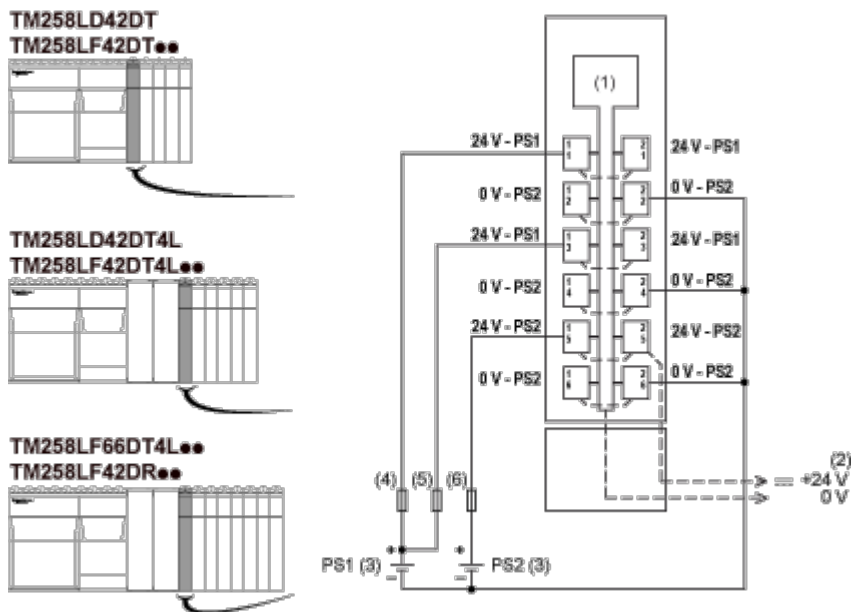
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**Wire Sizes to Use with Removable Spring Terminal Blocks**

 $\frac{\text{mm}}{\text{in}}$				
$\text{mm}^2$	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 16

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