

# 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<br>4 fast output |

## Complementary

|   |   |
|---|---|
| Discrete Input Number                         | 10 for fast input<br>12 for input<br>4 for regular input  |
| Discrete Input Logic                          | Sink for fast input<br>Sink for regular input<br>Source for input   |
| Discrete Input Voltage                        | 24 V  |
| Discrete Input Voltage Type                   | DC  |
| Voltage State 1 Guaranteed                    | >= 15 V for fast input<br>>= 15 V for fast output<br>>= 15 V for regular input  |
| Voltage State 0 Guaranteed                    | <= 5 V for fast input<br><= 5 V for fast output<br><= 5 V for regular input   |
| Discrete Input Current                        | 4 mA for fast input<br>4 mA for regular input   |
| Input Impedance                               | 6 kOhm for fast input<br>6 kOhm for regular input   |
| Configurable Filtering Time                   | 0 ms for fast input/regular input and fast output<br>1.5 ms for fast input/regular input and fast output<br>12 ms for fast input/regular input and fast output<br>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<br><30 m for fast output<br><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   |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                            |  |
|----------------------------|--|
| Discrete Output Current    | 4 mA for fast output   |
| [Us] Rated Supply Voltage  | 24 V DC for embedded expert modules power<br>24 V DC for I/O power segment<br>24 V DC for main supply  |
| Supply Voltage Limits      | 20.4...28.8 V  |
| [In] Rated Current         | 0.04 A for embedded expert modules power<br>0.25 A for main supply<br>10 A for I/O power segment   |
| Peak Current               | 100 kA (duration = <= 70 s) for main supply<br>25 kA (duration = <= 500 s) for I/O power segment<br>50 kA (duration = <= 150 s) for embedded expert modules power<br>1.2 A (duration = > 70 s) for main supply   |
| Power Consumption In W     | 13.03 W  |
| Memory Description         | Flash 128 MB<br>Internal RAM 64 MB   |
| Realtime Clock             | Without any user calibration clock, clock drift < 30 s/month at 25 °C<br>With user calibration clock, 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 with female RJ45 connectorModbus with master/slave RTU/<br>ASCII or character mode ASCII, physical interface: RS232/RS485, transmission rate:<br>300...115200 bps<br>1 isolated serial link with female RJ45 connectorEthernet Modbus TCP/IP with slave,<br>physical interface: 10BASE-T/100BASE-TX<br>1 isolated serial link with mini B USB connector, transmission rate: 480 Mbit/s<br>1 isolated serial link with USB type A connector, transmission rate: 480 Mbit/s |
| Counting Input Number      | 8 counting input(s) at 200 kHz   |
| Local Signalling           | 1 LED per channel for I/O state<br>1 LED for CAN0 STS<br>1 LED for MBS COM<br>1 LED green/red for APP0<br>1 LED green/red for APP1<br>1 LED green/red for Eth NS (Ethernet network status)<br>1 LED green/red for Eth ST (Ethernet status)<br>1 LED green/red for RUN/MS (module status)<br>1 LED green/red for USB host<br>1 LED green/yellow for Eth LA (Ethernet activity)<br>1 LED red for BATT (battery status)   |
| Marking                    | CE   |
| Mounting Support           | Symmetrical DIN rail   |
| Width                      | 175 mm   |
| Height                     | 99 mm  |
| Depth                      | 85 mm  |
| Net Weight                 | 0.5 kg   |

## Environment

|                                       |   |
|---------------------------------------|---|
| Standards                             | CSA C22.2 No 142<br>UL 508<br>IEC 61131-2<br>CSA C22.2 No 213   |
| Product Certifications                | C-Tick<br>CSA<br>cULus<br>GOST-R  |
| Ambient Air Temperature For Operation | 0...55 °C without derating (horizontal installation)<br>0...60 °C with derating factor (horizontal installation)<br>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                  | 1 gn at 8.4...150 Hz on DIN rail<br>3.5 mm at 5...8.4 Hz on DIN rail  |
| Shock Resistance                      | 15 gn for 11 ms   |
| Resistance To Electrostatic Discharge | 4 kV on contact conforming to IEC 61000-4-2<br>8 kV in air conforming to IEC 61000-4-2  |
| Resistance To Electromagnetic Fields  | 1 V/m 2...2.7 GHz conforming to IEC 61000-4-3<br>10 V/m 80...2000 MHz conforming to IEC 61000-4-3   |
| Resistance To Fast Transients         | 1 kV (I/O) conforming to IEC 61000-4-4<br>1 kV (shielded cable) conforming to IEC 61000-4-4<br>2 kV (power lines) conforming to IEC 61000-4-4 |
| Surge Withstand                       | 0.5 kV differential mode conforming to IEC 61000-4-5<br>1 kV common mode conforming to IEC 61000-4-5  |
| Disturbance Radiated/Conducted        | CISPR 11  |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type Of Package 1       | PCE       |
| Number Of Units In Package 1 | 1         |
| Package 1 Height             | 13.000 cm |
| Package 1 Width              | 15.500 cm |
| Package 1 Length             | 31.500 cm |
| Package 1 Weight             | 766.000 g |
| Unit Type Of Package 2       | S04       |
| Number Of Units In Package 2 | 6         |
| Package 2 Height             | 30.000 cm |
| Package 2 Width              | 40.000 cm |
| Package 2 Length             | 60.000 cm |
| Package 2 Weight             | 5.534 kg  |

## Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

## 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 >](#)

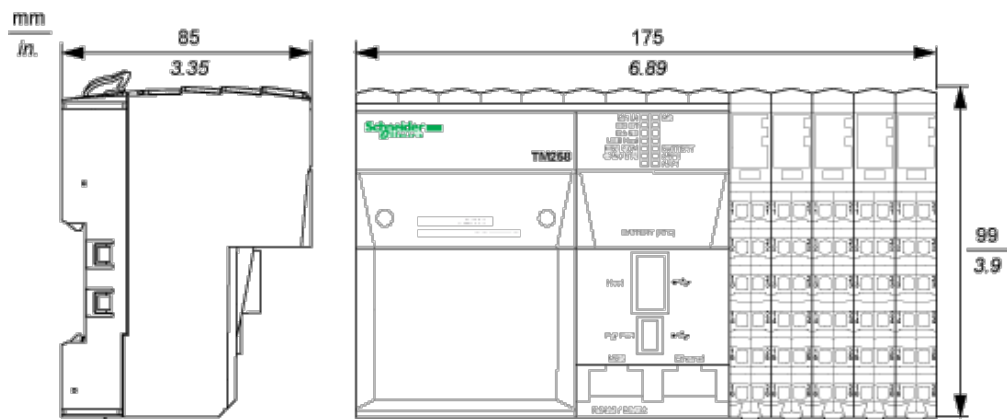
[Guide to assess a product's sustainability >](#)

## Well-being performance

|  |   |
|--|---|
|  Toxic Heavy Metal Free     |   |
|  Mercury Free               |   |
|  Rohs Exemption Information | <a href="#">Yes</a>   |
|  Pvc Free                   |   |
| <b>Reach Regulation</b>  | <a href="#">REACH Declaration</a>   |
| <b>Eu Rohs Directive</b>   | Pro-active compliance (Product out of EU RoHS legal scope)  |
| <b>China Rohs Regulation</b>   | <a href="#">China RoHS declaration</a>  |
| <b>Weee</b>  | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

Controller




Dimensions



Connections and Schema

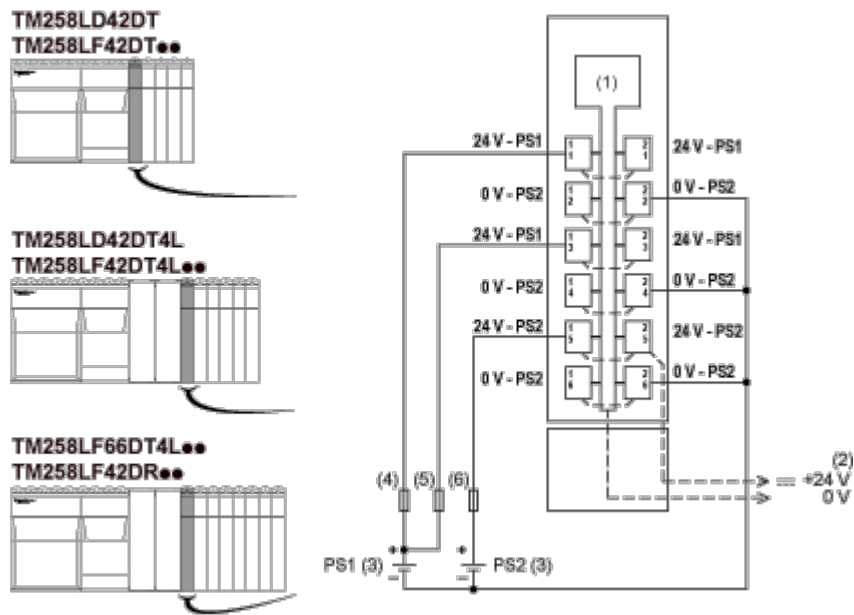
TM5 System Wiring Recommendations

Wire Sizes to Use with Removable Spring Terminal Blocks

| <div><div>mm</div><div>in</div></div> <div></div> |  |  |  |  |
|--|---|---|---|---|
| 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