

Schneider Service Manual

TM258LF42DT

1. Description

Schneider Electric TM258LF42DT

3. Product Information

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Schneider Electric TM258LF42DT

compact base M258 - 42 I/O - 24 V DC -

CANopen

Main

Range of product Modicon M258

Product or component type Logic controller

Product specific application -

Discrete I/O number 42

Discrete output number 12 for output

4 for 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 ≥ 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 μ s...4 ms (configurable) fast input/regular input and fast output

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

Discrete output current 4 mA for fast output

[Us] rated supply voltage 24 V DC for embedded expert modules power

24 V DC for I/O power segment

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

0.26 A for main supply

10 A for I/O power segment

Peak current ≤ 100 kA during ≤ 70 s main supply

≤ 25 kA during ≤ 500 s I/O power segment

≤ 50 kA during ≤ 150 s embedded expert modules power

1.2 A during > 70 s main supply

Power consumption in W ≤ 13.03 W

Execution time per instruction 22 ns : Boolean

Memory description Flash 128 MB

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Internal RAM 64 MB

Realtime clock With user calibration realtime clock, drift: ≤ 6 s/month

Without any user calibration realtime clock, drift: < 30 s/month at 25 °C

Data backed up Variables of type retain and retain persistent CR2477M Renata, 1.5 years autonomy

Integrated connection type 1 CANopen male SUB-D 9, CANopen master

1 isolated serial link female RJ45, Ethernet Modbus TCP/IP slave (10BASE-T/100BASE-TX)

1 isolated serial link female RJ45, Modbus master/slave RTU/ASCII or character mode ASCII

(RS232/RS485), 300...115200 bps

1 isolated serial link mini B USB, 480 Mbit/s

1 isolated serial link USB type A, 480 Mbit/s

Transmission rate 125 kbit/s for bus length of 500 m, CANopen

250 kbit/s for bus length of 250 m, CANopen

50 kbit/s for bus length of 1000 m, CANopen

500 kbit/s for bus length of 100 m, CANopen

10 kbit/s for bus length of 5000 m, CANopen

1000 kbit/s for bus length of 4 m, CANopen

20 kbit/s for bus length of 2500 m, CANopen

800 kbit/s for bus length of 25 m, CANopen

Counting input number 8 counting input(s) 200 kHz

Local signalling 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)

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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...55 °C without derating factor horizontal installation

0...60 °C with 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 1 gn 8.4...150 Hz DIN rail

3.5 mm 5...8.4 Hz DIN rail

Shock resistance 15 gn for 11 ms

Resistance to electrostatic discharge 4 kV on contact conforming to EN/IEC 61000-4-2

8 kV in air conforming to EN/IEC 61000-4-2

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Resistance to electromagnetic fields 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

Resistance to fast transients 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

Surge withstand 0.5 kV differential mode conforming to EN/IEC 61000-4-5

1 kV common mode conforming to EN/IEC 61000-4-5

Electromagnetic compatibility EN/IEC 61000-4-6

Disturbance radiated/conducted CISPR 11

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