

Schneider Service Manual

TM258LF42DT

1. Description

Schneider Electric TM258LF42DT

3. Product Information

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

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)

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

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