

Product data sheet

Specifications



dPAC controller, Modicon M251, 24 V DC, integrated RAM 64 MB

TM251MDESE

Product availability: Stock - Normally stocked in distribution facility

Main

Range of Product	Modicon M251
Product or Component Type	Processor module
[Us] rated supply voltage	24 V DC

Complementary

Maximum number of I/O expansion module	7 (local I/O-Architecture) 14 (remote I/O-Architecture)
Supply voltage limits	19.2...28.8 V
Power consumption in W	45 W with max number of I/O expansion module)
Memory capacity	64 MB system memory RAM
Data backed up	128 MB built-in flash memory backup of user programs
Data storage equipment	<= 16 GB SD card optional)
Battery type	BR2032 lithium non-rechargeable 4 year(s)
Backup time	2 years 77 °F (25 °C)
Realtime clock	With
Clock drift	<= 60 s/month 14...122 °F (-10...50 °C)
Integrated connection type	USB port mini B USB 2.0 Non isolated serial link serial RJ45 RS232/RS485 Dual-port Ethernet 1 2 RJ45 Ethernet port Ethernet 2 RJ45
Port Ethernet	Ethernet 10BASE-T/100BASE-TX - 2 copper cable
Communication service	Modbus TCP client Modbus TCP server OPC UA server NTP client
Local signalling	1 LED (green) for PWR 1 LED (green) for RUN 1 LED (red) for module error (ERR) 1 LED (red) for I/O error (I/O) 1 LED (green) for SD card access (SD) 1 LED (red) for BAT 1 LED (green) for SL 1 LED (red) for bus fault on TM4 (TM4)
Electrical connection	removable screw terminal block power supply pitch 3.81 mm)
Marking	CE
Surge withstand	1 kV shielded cable common mode EN/IEC 61000-4-5 1 kV power lines common mode EN/IEC 61000-4-5 0.5 kV power lines differential mode EN/IEC 61000-4-5

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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

Mounting support	Top hat type TH35-15 rail IEC 60715 Top hat type TH35-7.5 rail IEC 60715 plate or panel with fixing kit
Height	3.5 in (90 mm)
Depth	3.5 in (90 mm)
Width	2.1 in (54 mm)
Product Weight	0.49 lb(US) (0.22 kg)

Environment

Standards	ANSI/ISA 12-12-01 CSA C22.2 No 142 CSA C22.2 No 213 EN/IEC 61131-2 UL 508
Product Certifications	cULus CSA RCM CE Achilles UKCA
Resistance to electrostatic discharge	8 kV in air EN/IEC 61000-4-2 4 kV on contact EN/IEC 61000-4-2
Resistance to electromagnetic fields	9.1 V/m (10 V/m) 80 MHz...1 GHz EN/IEC 61000-4-3 2.7 V/m (3 V/m) 1.4 GHz...2 GHz EN/IEC 61000-4-3 0.9 V/m (1 V/m) 2 GHz...3 GHz EN/IEC 61000-4-3
Resistance to fast transients	2 kV EN/IEC 61000-4-4 power lines) 1 kV EN/IEC 61000-4-4 Ethernet line) 1 kV EN/IEC 61000-4-4 serial link)
Resistance to conducted disturbances	10 V 80...1000 MHz EN/IEC 61000-4-3 3 V 1.4 GHz...2 GHz EN/IEC 61000-4-3 1 V 2 GHz...3 GHz EN/IEC 61000-4-3
Electromagnetic emission	Conducted emissions 120...69 dBµV/m QP power lines)10...150 kHz IEC 61000-6-4 Conducted emissions 63 dBµV/m QP power lines)1.5...30 MHz IEC 61000-6-4 Radiated emissions 40 dBµV/m QP class A 10 m)30...230 MHz IEC 61000-6-4 Conducted emissions 79...63 dBµV/m QP power lines)150...1500 kHz IEC 61000-6-4 Radiated emissions 47 dBµV/m QP class A 10 m)230...1000 MHz IEC 61000-6-4
Immunity to microbreaks	10 ms
Ambient air temperature for operation	14...95 °F (-10...35 °C) vertical installation) 14...131 °F (-10...55 °C) horizontal installation)
Ambient Air Temperature for Storage	-40...158 °F (-40...70 °C)
Relative humidity	10...95 %, without condensation in operation) 10...95 %, without condensation in storage)
IP degree of protection	IP20 with protective cover in place
Pollution degree	2
Operating altitude	0...6561.68 ft (0...2000 m)
Storage altitude	0...9842.5 ft (0...3000 m)
Vibration resistance	3.5 mm 5...8.4 Hz symmetrical rail 1 gn 8.4...150 Hz symmetrical rail 3 gn 8.7...150 Hz panel mounting
Shock resistance	15 gn 11 ms

Ordering and shipping details

Category	US1PC1522555
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Discount Schedule	PC15
GTIN	03606481906991
Returnability	Yes
Country of origin	ID

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	4.173 in (10.600 cm)
Package 1 Width	4.724 in (12.000 cm)
Package 1 Length	6.693 in (17.000 cm)
Package weight(Lbs)	13.122 oz (372.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	10
Package 2 Height	11.811 in (30.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	9.586 lb(US) (4.348 kg)

Contractual warranty

Warranty (in months)	18
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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



Environmental footprint

Total lifecycle Carbon footprint	696 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	17 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	2 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	676 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0.7 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile

Use Better



Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	C0f4b1e4-ee0f-48bb-9bdf-1bcc0df7db56
EU RoHS Directive	Compliant By Exemption
REACH Regulation	Reference contains Substances of Very High Concern above the threshold
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Use Longer



Lifetime extension

Repair	No
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Use Again

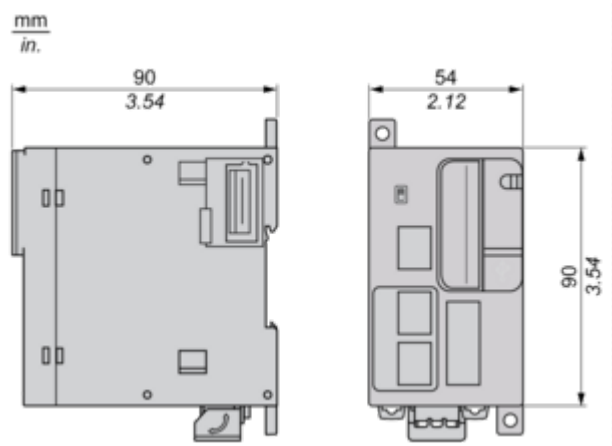


Repack and remanufacture

Recyclability potential, in %	10
Circularity Profile	End of Life Information
Take-back	No
WEEE Label	 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

Dimensions Drawings

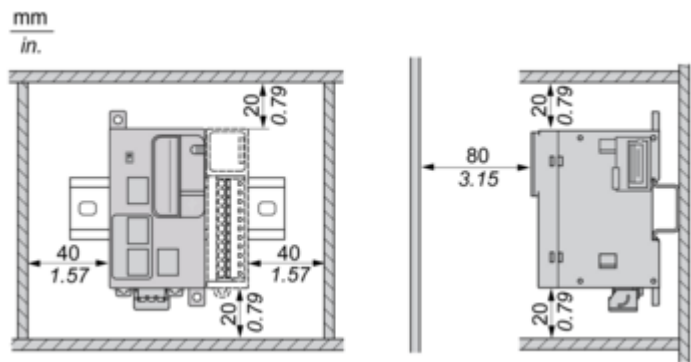
Dimensions



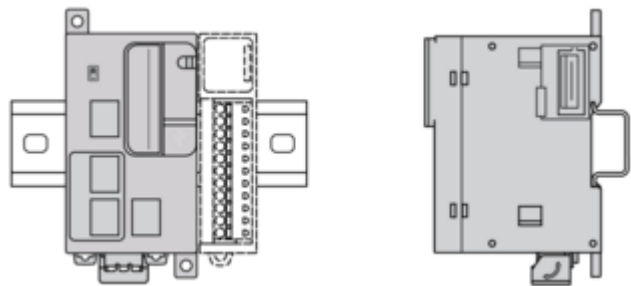
Mounting and Clearance

Mounting and Clearance

Clearance

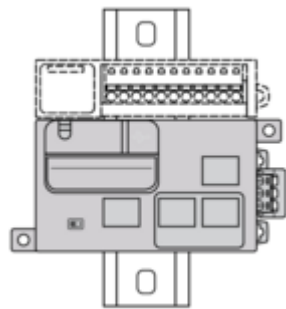


Mounting Position



NOTE: Keep adequate spacing for proper ventilation and to maintain an ambient temperature between -10°C (14°F) and 55°C (131°F).

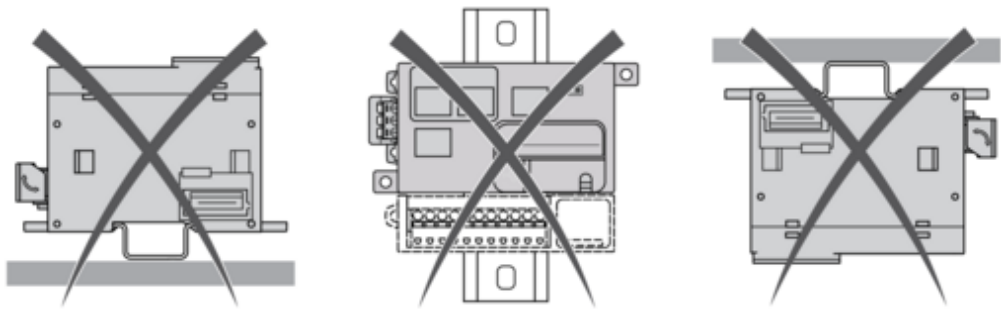
Acceptable Mounting



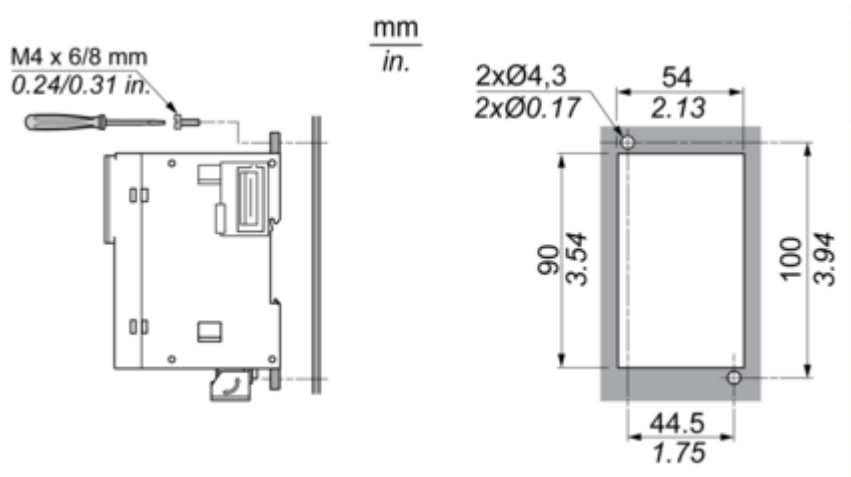
NOTE: Expansion modules must be mounted above the controller.

Incorrect Mounting





Direct Mounting on a Panel Surface



Connections and Schema

Wiring

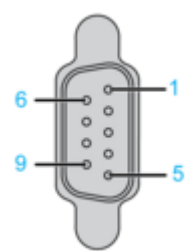
USB Connection to a PC



Ethernet Connection to a PC



CANopen



Pin	Signal	Description
1	–	Reserved
2	CAN_L	CAN_L bus line
3	CAN_GND	CAN ground
4	–	Reserved
5	(CAN_SHLD)	Optional CAN shield
6	GND	Ground
7	CAN_H	CAN_H bus line
8	–	Reserved
9	(CAN_V+)	Optional CAN external positive supply

Image of product / Alternate images

Alternative

