

Product data sheet

Specifications



module network TM4 4 Ethernet switches

TM4ES4

Main

Product or component type Ethernet unmanaged switch

Complementary

Range compatibility Modicon M251
Modicon M241

Product compatibility Modicon M241 logic controller
Modicon M251 logic controller

Current consumption 360 mA at 5 V DC for communication bus

Integrated connection type Ethernet: 4 RJ45 connector

Transmission rate 10/100 Mbit/s

Port Ethernet 10BASE-T/100BASE-TX - 4 port(s) copper cable

Web services Web server

Communication service Modbus TCP server
Modbus TCP slave device
FTP
NGVL
Monitoring
IEC VAR ACCESS
Programming
SNMP
Modbus TCP client
Downloading
Updating firmware
Ethernet/IP slave device
DHCP client

Maximum number of connections 8 Modbus server
16 Ethernet/IP device

Communication port protocol Ethernet IP/Modbus TCP
TCP (Transmission Control Protocol)
UDP (User Datagram Protocol)
SNMP

Redundancy No

Local signalling 1 LED (green) for PWR
1 LED per channel (green/yellow) for Ethernet link
1 LED per channel (green) for Ethernet port activity

Electrical connection RJ45 4 connectors for connecting Ethernet network
Screw connector terminal for connecting the functional ground

Marking CE

Surge withstand 1 kV power lines (DC) common mode conforming to EN/IEC 61000-4-5
2 kV power lines (AC) common mode conforming to EN/IEC 61000-4-5
2 kV relay output common mode conforming to EN/IEC 61000-4-5
1 kV I/O common mode conforming to EN/IEC 61000-4-5
1 kV shielded cable common mode conforming to EN/IEC 61000-4-5
0.5 kV power lines (DC) differential mode conforming to EN/IEC 61000-4-5

1 kV power lines (AC) differential mode conforming to EN/IEC 61000-4-5
 1 kV relay output differential mode conforming to EN/IEC 61000-4-5
 0.5 kV I/O differential mode conforming to EN/IEC 61000-4-5

Mounting support	Top hat type TH35-15 rail conforming to IEC 60715 Top hat type TH35-7.5 rail conforming to IEC 60715 plate or panel with fixing kit
Width	25 mm
Height	90 mm
Depth	90 mm
Net weight	0.125 kg

Environment

Standards	UL 508 EN/IEC 61131-2
Product certifications	cULus C-Tick
Resistance to electrostatic discharge	8 kV in air conforming to EN/IEC 61000-4-2 4 kV on contact conforming to EN/IEC 61000-4-2 8 kV in air conforming to Marine specification (LR, ABS, DNV, GL) 6 kV on contact conforming to Marine specification (LR, ABS, DNV, GL)
Resistance to electromagnetic fields	10 V/m 80 MHz...1 GHz conforming to EN/IEC 61000-4-3 3 V/m 1.4 GHz...2 GHz conforming to EN/IEC 61000-4-3 1 V/m 2...2.7 GHz conforming to EN/IEC 61000-4-3
Resistance to fast transients	2 kV (power lines) conforming to EN/IEC 61000-4-4 2 kV (relay output) conforming to EN/IEC 61000-4-4 1.5 kV (I/O) conforming to EN/IEC 61000-4-4 1 kV (Ethernet line) conforming to EN/IEC 61000-4-4 1 kV (serial link) conforming to EN/IEC 61000-4-4
Resistance to conducted disturbances	10 V 0.15...80 MHz conforming to EN/IEC 61000-4-6 3 V 0.1...80 MHz conforming to Marine specification (LR, ABS, DNV, GL) 10 V spot frequency (2, 3, 4, 6.2, 8.2, 12.6, 16.5, 18.8, 22, 25 MHz) conforming to Marine specification (LR, ABS, DNV, GL)
Electromagnetic emission	Conducted emissions - test level: 79 dB μ V/m QP/66 dB μ V/m AV (power lines (AC)) at 0.15...0.5 MHz conforming to EN/IEC 55011 Conducted emissions - test level: 73 dB μ V/m QP/60 dB μ V/m AV (power lines (AC)) at 0.5...300 MHz conforming to EN/IEC 55011 Conducted emissions - test level: 120...69 dB μ V/m QP (power lines) at 10...150 kHz conforming to EN/IEC 55011 Conducted emissions - test level: 63 dB μ V/m QP (power lines) at 1.5...30 MHz conforming to EN/IEC 55011 Radiated emissions - test level: 40 dB μ V/m QP class A at 30...230 MHz conforming to EN/IEC 55011 Radiated emissions - test level: 60...54 dB μ V/m QP at 30...100 MHz conforming to Marine specification (LR, ABS, DNV, GL) Radiated emissions - test level: 24 dB μ V/m QP at 156...165 MHz conforming to Marine specification (LR, ABS, DNV, GL) Conducted emissions - test level: 79...63 dB μ V/m QP (power lines) at 150...1500 kHz conforming to EN/IEC 55011 Radiated emissions - test level: 47 dB μ V/m QP class A at 230...1000 MHz conforming to EN/IEC 55011 Radiated emissions - test level: 80...50 d μ V/m QP at 150...30000 kHz conforming to Marine specification (LR, ABS, DNV, GL) Radiated emissions - test level: 54 dB μ V/m QP at 100...2000 MHz conforming to Marine specification (LR, ABS, DNV, GL)
Ambient air temperature for operation	-10...55 °C horizontal installation -10...50 °C vertical installation
Ambient air temperature for storage	-25...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...2000 m
Storage altitude	0...3000 m
Vibration resistance	1 mm at 5...13.2 Hz on symmetrical rail 3 gn at 8.7...150 Hz on symmetrical rail 1 mm at 5...13.2 Hz on panel mounting 0.7 gn at 13.2...100 Hz on panel mounting

Shock resistance	15 gn for 11 ms
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Packing Units

Unit Type of Package 1	PCE
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Number of Units in Package 1	1
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Package 1 Weight	210.0 g
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Package 1 Height	5.635 cm
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Package 1 width	11.532 cm
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Package 1 Length	17.033 cm
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Unit Type of Package 2	S03
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Number of Units in Package 2	20
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Package 2 Weight	5.04 kg
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Package 2 Height	30 cm
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Package 2 width	30 cm
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Package 2 Length	40 cm
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Offer Sustainability

Sustainable offer status	Green Premium product
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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) EU RoHS Declaration
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Mercury free	Yes
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RoHS exemption information	Yes
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China RoHS Regulation	China RoHS declaration
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Environmental Disclosure	Product Environmental Profile
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Circularity Profile	End of Life Information
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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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PVC free	Yes
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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
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