

Product data sheet

Specifications



network switch module, Modicon M241, 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

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

Surge withstand	<p>1 kV power lines (DC) common mode conforming to IEC 61000-4-5</p> <p>2 kV power lines (AC) common mode conforming to IEC 61000-4-5</p> <p>2 kV relay output common mode conforming to IEC 61000-4-5</p> <p>1 kV I/O common mode conforming to IEC 61000-4-5</p> <p>1 kV shielded cable common mode conforming to IEC 61000-4-5</p> <p>0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5</p> <p>1 kV power lines (AC) differential mode conforming to IEC 61000-4-5</p> <p>1 kV relay output differential mode conforming to IEC 61000-4-5</p> <p>0.5 kV I/O differential mode conforming to IEC 61000-4-5</p>
Mounting support	<p>Top hat type TH35-15 rail conforming to IEC 60715</p> <p>Top hat type TH35-7.5 rail conforming to IEC 60715</p> <p>plate or panel with fixing kit</p>
Width	25 mm
Height	90 mm
Depth	90 mm
Net weight	0.125 kg

Environment

Standards	<p>UL 508</p> <p>IEC 61131-2</p>
Product certifications	<p>cULus</p> <p>C-Tick</p>
Resistance to electrostatic discharge	<p>8 kV in air conforming to IEC 61000-4-2</p> <p>4 kV on contact conforming to IEC 61000-4-2</p> <p>8 kV in air conforming to Marine specification (LR, ABS, DNV, GL)</p> <p>6 kV on contact conforming to Marine specification (LR, ABS, DNV, GL)</p>
Resistance to electromagnetic fields	<p>10 V/m 80 MHz...1 GHz conforming to IEC 61000-4-3</p> <p>3 V/m 1.4 GHz...2 GHz conforming to IEC 61000-4-3</p> <p>1 V/m 2...2.7 GHz conforming to IEC 61000-4-3</p>
Resistance to fast transients	<p>2 kV (power lines) conforming to IEC 61000-4-4</p> <p>2 kV (relay output) conforming to IEC 61000-4-4</p> <p>1.5 kV (I/O) conforming to IEC 61000-4-4</p> <p>1 kV (Ethernet line) conforming to IEC 61000-4-4</p> <p>1 kV (serial link) conforming to IEC 61000-4-4</p>
Resistance to conducted disturbances	<p>10 V 0.15...80 MHz conforming to IEC 61000-4-6</p> <p>3 V 0.1...80 MHz conforming to Marine specification (LR, ABS, DNV, GL)</p> <p>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)</p>
Electromagnetic emission	<p>Conducted emissions - test level: 79 dBμV/m QP/66 dBμV/m AV (power lines (AC)) at 0.15...0.5 MHz conforming to IEC 55011</p> <p>Conducted emissions - test level: 73 dBμV/m QP/60 dBμV/m AV (power lines (AC)) at 0.5...300 MHz conforming to IEC 55011</p> <p>Conducted emissions - test level: 120...69 dBμV/m QP (power lines) at 10...150 kHz conforming to IEC 55011</p> <p>Conducted emissions - test level: 63 dBμV/m QP (power lines) at 1.5...30 MHz conforming to IEC 55011</p> <p>Radiated emissions - test level: 40 dBμV/m QP class A at 30...230 MHz conforming to IEC 55011</p> <p>Radiated emissions - test level: 60...54 dBμV/m QP at 30...100 MHz conforming to Marine specification (LR, ABS, DNV, GL)</p> <p>Radiated emissions - test level: 24 dBμV/m QP at 156...165 MHz conforming to Marine specification (LR, ABS, DNV, GL)</p> <p>Conducted emissions - test level: 79...63 dBμV/m QP (power lines) at 150...1500 kHz conforming to IEC 55011</p> <p>Radiated emissions - test level: 47 dBμV/m QP class A at 230...1000 MHz conforming to IEC 55011</p> <p>Radiated emissions - test level: 80...50 dBμV/m QP at 150...30000 kHz conforming to Marine specification (LR, ABS, DNV, GL)</p> <p>Radiated emissions - test level: 54 dBμV/m QP at 100...2000 MHz conforming to Marine specification (LR, ABS, DNV, GL)</p>
Ambient air temperature for operation	<p>-10...55 °C horizontal installation</p> <p>-10...50 °C vertical installation</p>
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

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.635 cm
Package 1 Width	11.532 cm
Package 1 Length	17.033 cm
Package 1 Weight	210.0 g
Unit Type of Package 2	S03
Number of Units in Package 2	20
Package 2 Height	30 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	5.04 kg
Unit Type of Package 3	P06
Number of Units in Package 3	160
Package 3 Height	75 cm
Package 3 Width	60 cm
Package 3 Length	80 cm
Package 3 Weight	48 kg



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	96
Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances	
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	5f9bf620-80e3-4249-adf7-f86659e9a73e
REACH Regulation	REACH Declaration
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
PVC free	Yes

Use Again

Repack and remanufacture	
End of life manual availability	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