Product data sheet Characteristics

TM4ES4

network switch module, Modicon M241, 4 Ethernet switchs





Main

Product or component	Ethernet unmanaged switch
type	

Complementary

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 Maximum number of connections	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 8 Modbus server
Maximum number of connections	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
Product weight	0.125 kg

Environment

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 MHz1 GHz conforming to EN/IEC 61000-4-3 3 V/M 1.4 GHz2 GHz conforming to EN/IEC 61000-4-3 1 V/m 22.7 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 0.1580 MHz conforming to EN/IEC 61000-4-6 3 V 0.180 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 dBμV/m QP/66 dBμV/m AV (power lines (AC)) at 0.150.5 MHz conforming to EN/IEC 55011 Conducted emissions - test level: 73 dBμV/m QP/60 dBμV/m AV (power lines (AC)) at 0.5300 MHz conforming to EN/IEC 55011 Conducted emissions - test level: 12069 dBμV/m QP (power lines) at 10 150 kHz conforming to EN/IEC 55011 Conducted emissions - test level: 63 dBμV/m QP (power lines) at 1.530 MHz conforming to EN/IEC 55011 Radiated emissions - test level: 40 dBμV/m QP class A at 30230 MHz conforming to EN/IEC 55011 Radiated emissions - test level: 6054 dBμV/m QP at 30100 MHz conforming to Marine specification (LR, ABS, DNV, GL) Radiated emissions - test level: 24 dBμV/m QP at 156165 MHz conforming to Marine specification (LR, ABS, DNV, GL) Conducted emissions - test level: 7963 dBμV/m QP (power lines) at 150 1500 kHz conforming to EN/IEC 55011 Radiated emissions - test level: 47 dBμV/m QP class A at 2301000 MHz conforming to EN/IEC 55011 Radiated emissions - test level: 8050 dμV/m QP at 15030000 kHz conforming to Marine specification (LR, ABS, DNV, GL) Radiated emissions - test level: 8050 dμV/m QP at 15030000 kHz conforming to Marine specification (LR, ABS, DNV, GL)
Ambient air temperature for operation	-1055 °C horizontal installation -1050 °C vertical installation
Ambient air temperature for storage	-2570 °C
Relative humidity	1095 %, without condensation (in operation) 1095 %, without condensation (in storage)
IP degree of protection	IP20 with protective cover in place
Pollution degree	2
Operating altitude	02000 m
Storage altitude	03000 m

Vibration resistance	1 mm at 513.2 Hz on symmetrical rail 3 gn at 8.7150 Hz on symmetrical rail 1 mm at 513.2 Hz on panel mounting 0.7 gn at 13.2100 Hz on panel mounting
Shock resistance	15 gn for 11 ms

Packing Units

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

Offer Sustainability

Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EVEN RoHS Declaration
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	₫Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes
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