Product data sheet Characteristics

TM4ES4

module network TM4 4 Ethernet switchs



Main

Wall	
Commercial Status	Commercialised
Product or component type	Ethernet unmanaged switch

Complementary

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Range compatibility	Modicon M241 Modicon M251	
Product compatibility	Modicon M251 logic controller Modicon M241 logic controller	
Current consumption	360 mA at 5 V DC for communication bus	
Integrated connection type	4 RJ45 Ethernet	
Transmission rate	10/100 Mbit/s	
Port Ethernet	10BASE-T/100BASE-TX - 4 port(s) copper cable	
Web services	Web server	
Communication service	FTP SNMP DHCP client Modbus TCP server Modbus TCP client IEC VAR ACCESS Modbus TCP slave device Ethernet/IP slave device NGVL Programming Downloading Updating firmware Monitoring	
Maximum number of connections	16 Ethernet/IP device 8 Modbus server	
Communication port protocol	SNMP TCP (Transmission Control Protocol) UDP (User Datagram Protocol) Ethernet IP/Modbus TCP	
Redundancy	No	
Local signalling	LED per channel green for Ethernet port activity LED per channel green/yellow for Ethernet link LED green for PWR	
Electrical connection	Screw connector - terminal for connecting the functional ground RJ45 - 4 connectors for connecting Ethernet network	
Marking	CE	

Surge withstand	0.5 kV (I/O) with differential mode protection conforming to EN/IEC 61000-4-5 1 kV (relay output) with differential mode protection conforming to EN/IEC 61000-4-5
	1 kV (power lines (AC)) with differential mode protection conforming to EN/IEC 61000-4-5
	0.5 kV (power lines (DC)) with differential mode protection conforming to EN/IEC
	61000-4-5 1 kV (shielded cable) with common mode protection conforming to EN/IEC 61000-4-5
	1 kV (I/O) with common mode protection conforming to EN/IEC 61000-4-5 2 kV (relay output) with common mode protection conforming to EN/IEC 61000-4-5
	2 kV (power lines (AC)) with common mode protection conforming to EN/IEC
	61000-4-5 1 kV (power lines (DC)) with common mode protection conforming to EN/IEC
	61000-4-5
Mounting support	Plate or panel with fixing kit Top hat type TH35-7.5 rail conforming to IEC 60715 Top hat type TH35-15 rail conforming to IEC 60715
Width	0.98 in (25 mm)
Height	3.54 in (90 mm)
Depth	3.54 in (90 mm)
Product weight	0.28 lb(US) (0.125 kg)
Environment	
Standards	EN/IEC 61131-2 UL 508
Product certifications	C-Tick CULus
Resistance to electrostatic discharge	6 kV (on contact) conforming to Marine specification (LR, ABS, DNV, GL) 8 kV (in air) conforming to Marine specification (LR, ABS, DNV, GL)
	4 kV (on contact) conforming to EN/IEC 61000-4-2
Designation and the state of th	8 kV (in air) conforming to EN/IEC 61000-4-2
Resistance to electromagnetic fields	0.91 V/yd (1 V/m) (22.7 GHz) conforming to EN/IEC 61000-4-3 3 V/m (1.4 GHz2 GHz) conforming to EN/IEC 61000-4-3 10 V/m (80 MHz1 GHz) conforming to EN/IEC 61000-4-3
Resistance to fast transients	1 kV (serial link) conforming to EN/IEC 61000-4-4 1 kV (Ethernet line) conforming to EN/IEC 61000-4-4
	1.5 kV (I/O) conforming to EN/IEC 61000-4-4
	2 kV (relay output) conforming to EN/IEC 61000-4-4 2 kV (power lines) conforming to EN/IEC 61000-4-4
Resistance to conducted disturbances, induced by	10 V (spot frequency (2, 3, 4, 6.2, 8.2, 12.6, 16.5, 18.8, 22, 25 MHz)) conforming to
radio frequency fields	Marine specification (LR, ABS, DNV, GL) 3 V (0.180 MHz) conforming to Marine specification (LR, ABS, DNV, GL)
	10 V (0.1580 MHz) conforming to Mainte Specification (ER, ABS, DNV, GE)
Electromagnetic emission	Radiated emissions - test level: 24 dBμV/m QP at 156165 MHz conforming to
	Marine specification (LR, ABS, DNV, GL) Radiated emissions - test level: 54 dBμV/m QP at 100 MHz2 GHz conforming to
	Marine specification (LR, ABS, DNV, GL) Radiated emissions - test level: 6054 dBµV/m QP at 30100 MHz conforming to
	Marine specification (LR, ABS, DNV, GL)
	Radiated emissions - test level: 8050 dμV/m QP at 150 kHz30 MHz conforming to Marine specification (LR, ABS, DNV, GL)
	Radiated emissions - test level: 47 dBµV/m QP class A at 230 MHz1 GHz
	conforming to EN/IEC 55011 Radiated emissions - test level: 40 dBµV/m QP class A at 30230 MHz conforming to
	EN/IEC 55011
	Conducted emissions - test level: 63 dBµV/m QP (power lines) at 1.530 MHz conforming to EN/IEC 55011
	Conducted emissions - test level: 7963 dBµV/m QP (power lines) at 150 kHz1.5
	MHz conforming to EN/IEC 55011 Conducted emissions - test level: 12069 dBμV/m QP (power lines) at 10150 kHz
	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 0.5300 MHz conforming to EN/IEC 55011
	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
Ambient air temperature for operation	14122 °F (-1050 °C) vertical installation -1055 °C horizontal installation
Ambient air temperature for storage	-13158 °F (-2570 °C)

Relative humidity	1095 % without condensation in storage1095 % without condensation in operation	
IP degree of protection	IP20 with protective cover in place	
Pollution degree	2	
Operating altitude	06561.68 ft (02000 m)	
Storage altitude	09842.52 ft (03000 m)	
Vibration resistance	0.7 gn at 13.2100 Hz on panel mounting 1 mm at 513.2 Hz on panel mounting 3 gn at 8.7150 Hz on symmetrical rail 1 mm at 513.2 Hz on symmetrical rail	
Shock resistance	15 gn during 11 ms	