# Product data sheet

Specifications



## network switch module, Modicon M241, 4 Ethernet switchs

TM4ES4

**Product availability: Stock - Normally stocked in distribution facility**

## Main

| | |
|---|---|
| **Product or Component Type** | Ethernet unmanaged switch |

## Complementary

| | |
|---|---|
| **Range Compatibility** | Modicon M251<br>Modicon M241 |
| **Product compatibility** | Modicon M241 logic controller<br>Modicon M251 logic controller |
| **Current consumption** | 360 mA 5 V DC communication bus |
| **Integrated connection type** | Ethernet 4 RJ45 |
| **Transmission rate** | 10/100 Mbit/s |
| **Port Ethernet** | 10BASE-T/100BASE-TX - 4 copper cable |
| **Web services** | Web server |
| **Communication Service** | Modbus TCP server<br>Modbus TCP slave device<br>FTP<br>NGVL<br>Monitoring<br>IEC VAR ACCESS<br>Programming<br>SNMP<br>Modbus TCP client<br>Downloading<br>Updating firmware<br>Ethernet/IP slave device<br>DHCP client |
| **Maximum number of connections** | 8 Modbus server<br>16 Ethernet/IP device |
| **Communication Port Protocol** | Ethernet IP/Modbus TCP<br>TCP (Transmission Control Protocol)<br>UDP (User Datagram Protocol)<br>SNMP |
| **Redundancy** | No |
| **Local signalling** | 1 LED (green) for PWR<br>1 LED per channel (green/yellow) for Ethernet link<br>1 LED per channel (green) for Ethernet port activity |
| **Electrical connection** | RJ45 4 connectors for connecting Ethernet network<br>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

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

| | |
|---|---|
| **Surge withstand** | 1 kV power lines (DC) common mode IEC 61000-4-5<br>2 kV power lines (AC) common mode IEC 61000-4-5<br>2 kV relay output common mode IEC 61000-4-5<br>1 kV I/O common mode IEC 61000-4-5<br>1 kV shielded cable common mode IEC 61000-4-5<br>0.5 kV power lines (DC) differential mode IEC 61000-4-5<br>1 kV power lines (AC) differential mode IEC 61000-4-5<br>1 kV relay output differential mode IEC 61000-4-5<br>0.5 kV I/O differential mode IEC 61000-4-5 |
| **Mounting support** | Top hat type TH35-15 rail IEC 60715<br>Top hat type TH35-7.5 rail IEC 60715<br>plate or panel with fixing kit |
| **Width** | 1.0 in (25 mm) |
| **Height** | 3.5 in (90 mm) |
| **Depth** | 3.5 in (90 mm) |
| **Net Weight** | 0.276 lb(US) (0.125 kg) |

# Environment

| | |
|---|---|
| **Standards** | UL 508<br>IEC 61131-2 |
| **Product Certifications** | cULus<br>C-tick |
| **Resistance to electrostatic discharge** | 8 kV in air IEC 61000-4-2<br>4 kV on contact IEC 61000-4-2<br>8 kV in air Marine specification (LR, ABS, DNV, GL)<br>6 kV on contact Marine specification (LR, ABS, DNV, GL) |
| **Resistance to electromagnetic fields** | 9.1 V/m (10 V/m) 80 MHz...1 GHz IEC 61000-4-3<br>2.7 V/m (3 V/m) 1.4 GHz...2 GHz IEC 61000-4-3<br>0.9 V/m (1 V/m) 2...2.7 GHz IEC 61000-4-3 |
| **Resistance to fast transients** | 2 kV IEC 61000-4-4 power lines)<br>2 kV IEC 61000-4-4 relay output)<br>1.5 kV IEC 61000-4-4 I/O)<br>1 kV IEC 61000-4-4 Ethernet line)<br>1 kV IEC 61000-4-4 serial link) |
| **Resistance to conducted disturbances** | 10 V 0.15...80 MHz IEC 61000-4-6<br>3 V 0.1...80 MHz Marine specification (LR, ABS, DNV, GL)<br>10 V spot frequency (2, 3, 4, 6.2, 8.2, 12.6, 16.5, 18.8, 22, 25 MHz) Marine specification (LR, ABS, DNV, GL) |
| **Electromagnetic emission** | Conducted emissions 79 dBµV/m QP/66 dBµV/m AV power lines (AC))0.15…0.5 MHz IEC 55011<br>Conducted emissions 73 dBµV/m QP/60 dBµV/m AV power lines (AC))0.5…300 MHz IEC 55011<br>Conducted emissions 120...69 dBµV/m QP power lines)10…150 kHz IEC 55011<br>Conducted emissions 63 dBµV/m QP power lines)1.5…30 MHz IEC 55011<br>Radiated emissions 40 dBµV/m QP class A30…230 MHz IEC 55011<br>Radiated emissions 60...54 dBµV/m QP30…100 MHz Marine specification (LR, ABS, DNV, GL)<br>Radiated emissions 24 dBµV/m QP156…165 MHz Marine specification (LR, ABS, DNV, GL)<br>Conducted emissions 79...63 dBµV/m QP power lines)150…1500 kHz IEC 55011<br>Radiated emissions 47 dBµV/m QP class A230…1000 MHz IEC 55011<br>Radiated emissions 80...50 dµV/m QP150…30000 kHz Marine specification (LR, ABS, DNV, GL)<br>Radiated emissions 54 dBµV/m QP100…2000 MHz Marine specification (LR, ABS, DNV, GL) |
| **Ambient Air Temperature for Operation** | 14…131 °F (-10…55 °C) horizontal installation<br>14…122 °F (-10…50 °C) vertical installation |
| **Ambient Air Temperature for Storage** | -13…158 °F (-25…70 °C) |
| **Relative humidity** | 10…95 %, without condensation in operation)<br>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** | 1 mm 5…13.2 Hz symmetrical rail<br>3 gn 8.7…150 Hz symmetrical rail<br>1 mm 5…13.2 Hz panel mounting<br>0.7 gn 13.2…100 Hz panel mounting |
| **Shock resistance** | 15 gn 11 ms |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US10MSX22533 |
| **Discount Schedule** | 0MSX |
| **GTIN** | 3606480611216 |
| **Returnability** | Yes |
| **Country of origin** | ID |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Nbr. of units in pkg.** | 1 |
| **Package 1 Height** | 2.219 in (5.635 cm) |
| **Package 1 Width** | 4.540 in (11.532 cm) |
| **Package 1 Length** | 6.706 in (17.033 cm) |
| **Package weight(Lbs)** | 7.4 oz (210.0 g) |
| **Unit Type of Package 2** | S03 |
| **Number of Units in Package 2** | 20 |
| **Package 2 Height** | 11.8 in (30 cm) |
| **Package 2 Width** | 11.8 in (30 cm) |
| **Package 2 Length** | 15.7 in (40 cm) |
| **Package 2 Weight** | 11.11 lb(US) (5.04 kg) |
| **Unit Type of Package 3** | P06 |
| **Number of Units in Package 3** | 160 |
| **Package 3 Height** | 29.5 in (75 cm) |
| **Package 3 Width** | 23.6 in (60 cm) |
| **Package 3 Length** | 31.5 in (80 cm) |
| **Package 3 Weight** | 105.8 lb(US) (48 kg) |

## Contractual warranty

| | |
|---|---|
| **Warranty (in months)** | 18 |

## 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 kg CO2 eq.** |
| Carbon footprint of the manufacturing phase [A1 to A3] | **25 kg CO2 eq.** |
| Carbon footprint of the distribution phase [A4] | **0 kg CO2 eq.** |
| Carbon footprint of the installation phase [A5] | **0 kg CO2 eq.** |
| Carbon footprint of the use phase [B2, B3, B4, B6] | **71 kg CO2 eq.** |
| Carbon footprint of the end-of-life phase [C1 to C4] | **0.3 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 | **5f9bf620-80e3-4249-adf7-f86659e9a73e** |
| 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** |
| PVC free | **Yes** |

## Use Again

### Repack and remanufacture

| | |
|---|---|
| Recyclability potential, in % | **0** |
| 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.** |