

# Product datasheet

Specifications



## module network TM4 4 Ethernet switches

TM4ES4

Price: 4,624.18 ZAR

### 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 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<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                                                                                                                                                                                                                     |

Excluding VAT and subject to change. Please check with your local distributor through "Where to buy"

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Surge Withstand  | 1 kV power lines (DC) common mode conforming to IEC 61000-4-5<br>2 kV power lines (AC) common mode conforming to IEC 61000-4-5<br>2 kV relay output common mode conforming to IEC 61000-4-5<br>1 kV I/O common mode conforming to IEC 61000-4-5<br>1 kV shielded cable common mode conforming to IEC 61000-4-5<br>0.5 kV power lines (DC) differential mode conforming to IEC 61000-4-5<br>1 kV power lines (AC) differential mode conforming to IEC 61000-4-5<br>1 kV relay output differential mode conforming to IEC 61000-4-5<br>0.5 kV I/O differential mode conforming to IEC 61000-4-5 |
| Mounting Support | Top hat type TH35-15 rail conforming to IEC 60715<br>Top hat type TH35-7.5 rail conforming to IEC 60715<br>plate or panel with fixing kit                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Width            | 25 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Height           | 90 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Depth            | 90 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Net Weight       | 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 conforming to IEC 61000-4-2<br>4 kV on contact conforming to IEC 61000-4-2<br>8 kV in air conforming to Marine specification (LR, ABS, DNV, GL)<br>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 IEC 61000-4-3<br>3 V/m 1.4 GHz...2 GHz conforming to IEC 61000-4-3<br>1 V/m 2...2.7 GHz conforming to IEC 61000-4-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Resistance To Fast Transients         | 2 kV (power lines) conforming to IEC 61000-4-4<br>2 kV (relay output) conforming to IEC 61000-4-4<br>1.5 kV (I/O) conforming to IEC 61000-4-4<br>1 kV (Ethernet line) conforming to IEC 61000-4-4<br>1 kV (serial link) conforming to IEC 61000-4-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Resistance To Conducted Disturbances  | 10 V 0.15...80 MHz conforming to IEC 61000-4-6<br>3 V 0.1...80 MHz conforming to 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) 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 0.15...0.5 MHz conforming to IEC 55011<br>Conducted emissions - test level: 73 dBµV/m QP/60 dBµV/m AV ( power lines (AC)) at 0.5...300 MHz conforming to IEC 55011<br>Conducted emissions - test level: 120...69 dBµV/m QP ( power lines) at 10...150 kHz conforming to IEC 55011<br>Conducted emissions - test level: 63 dBµV/m QP ( power lines) at 1.5...30 MHz conforming to IEC 55011<br>Radiated emissions - test level: 40 dBµV/m QP class A at 30...230 MHz conforming to IEC 55011<br>Radiated emissions - test level: 60...54 dBµV/m QP at 30...100 MHz conforming to Marine specification (LR, ABS, DNV, GL)<br>Radiated emissions - test level: 24 dBµV/m QP at 156...165 MHz conforming to Marine specification (LR, ABS, DNV, GL)<br>Conducted emissions - test level: 79...63 dBµV/m QP ( power lines) at 150...1500 kHz conforming to IEC 55011<br>Radiated emissions - test level: 47 dBµV/m QP class A at 230...1000 MHz conforming to IEC 55011<br>Radiated emissions - test level: 80...50 dµV/m QP at 150...30000 kHz conforming to Marine specification (LR, ABS, DNV, GL)<br>Radiated emissions - test level: 54 dBµV/m QP at 100...2000 MHz conforming to Marine specification (LR, ABS, DNV, GL) |
| Ambient Air Temperature For Operation | -10...55 °C horizontal installation<br>-10...50 °C vertical installation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Ambient Air Temperature For Storage   | -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...2000 m                                                                                                                                                                |
| Storage Altitude        | 0...3000 m                                                                                                                                                                |
| Vibration Resistance    | 1 mm at 5...13.2 Hz on symmetrical rail<br>3 gn at 8.7...150 Hz on symmetrical rail<br>1 mm at 5...13.2 Hz on panel mounting<br>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     |

Sustainability



**Green Premium™ label** is Schneider Electric’s commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

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Transparency   RoHS/REACH

## Well-being performance

|                                                                                                              |     |
|--------------------------------------------------------------------------------------------------------------|-----|
|  Mercury Free               |     |
|  Rohs Exemption Information | Yes |
|  Pvc Free                   |     |

## Certifications & Standards

|                          |                                                                                                                             |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Reach Regulation         | <a href="#">REACH Declaration</a>                                                                                           |
| Eu Rohs Directive        | Pro-active compliance (Product out of EU RoHS legal scope)                                                                  |
| China Rohs Regulation    | <a href="#">China RoHS declaration</a>                                                                                      |
| Environmental Disclosure | <a href="#">Product Environmental Profile</a>                                                                               |
| Weee                     | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Circularity Profile      | <a href="#">End of Life Information</a>                                                                                     |