# FL SWITCH SMCS 16TX - Industrial Ethernet Switch

2700996

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Ethernet Smart Managed Compact Switch with 16 10/100 Mbps RJ45 ports

## Product description

The Smart Managed Compact Switch (SMCS) is an Ethernet switch suitable for industrial applications with 16 Fast Ethernet ports in RJ45 format.

## Your advantages

- MRP (client and manager)
- SNMP
- RSTP
- VLANs
- Web-based management, SNMP
- Extended temperature rating

## Commercial data

| | |
|---|---|
| Item number | 2700996 |
| Packing unit | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | DN17 |
| Product key | DNN122 |
| GTIN | 4046356692007 |
| Weight per piece (including packing) | 1,133 g |
| Weight per piece (excluding packing) | 1,030 g |
| Customs tariff number | 85176200 |
| Country of origin | DE |

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## Technical data

### Dimensions

| | |
|---|---|
| Width | 214 mm |
| Height | 110 mm |
| Depth | 69 mm |

### Material specifications

| | |
|---|---|
| Color | gray aluminum |
| Material base plate | Die-cast aluminum, corrosion-resistant |
| Housing material | Stainless steel 1.4301 |

### Mounting

| | |
|---|---|
| Mounting type | DIN rail mounting |

### Interfaces

Ethernet (RJ45)

| | |
|---|---|
| Connection method | RJ45 |
| Note on the connection method | Auto negotiation and autocrossing |
| Transmission speed | 10/100 Mbps |
| Transmission physics | Copper |
| Transmission length | 100 m (per segment) |
| Signal LEDs | Supply voltage, data transmission, error, link, activity |
| No. of channels | 16 (RJ45 ports) |

Serial (RS-232)

| | |
|---|---|
| Connection method | RS-232-C, 6-pos. MINI-DIN socket (PS/2) |

### Product properties

| | |
|---|---|
| Product type | Switch |
| Product family | Managed Switch SMCS |
| Type | Block design |
| MTTF | 406.72 Years (SN 29500 standard, temperature 25°C, operating cycle 21%) |
| | 200.07 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) |
| | 30.21 Years |

Insulation characteristics

| | |
|---|---|
| Protection class | III (VDE 0106) |

Switch functions

| | |
|---|---|
| Diagnostic functions | RMON History |
| | N:1-Portmirroring |
| | LLDP (Link Layer Discovery Protocol) |

| | SNMP-Traps |
|---|---|
| | ACD (Address Conflict Detection) |
| Basic functions | Store-and-forward switch complies with IEEE 802.3 4 priority classes in acc. with IEEE 802.1 P TCP/IP protocol, BootP-capable, port-mirroring, integrated web server function, multicast filtering, IGMP snooping, VLAN, Rapid Spanning Tree (RSTP), PROFINET Device, Media Redundancy Protocol (MRP). |
| Signal contact control voltage | 24 V (typical) |
| Signal contact control current | 190 mA (maximum) |
| PROFINET conformance class | Conformance-Class B |
| PROFINET device function | PROFINET device |
| | Fast Startup |
| Filter functions | Quality of Service (4 priority classes) |
| | Port-Priorisierung |
| | VLAN |
| | IGMP Snooping (128 groups) |
| | IGMP Query |
| | Auto-Query-Port |
| | Extended Multicast Filtering |
| | Static Multicast Filtering |
| MAC address table | 16000 |
| Management | Web-based management (HTTP) |
| | SNMP v1/v2 |
| | Serial interface (V.24) |
| Redundancy | MRP (Media Redundancy Protocol) |
| | RSTP (Rapid Spanning Tree Protocol) |
| | FRD (Fast Ring Detection) |
| | Large Tree Support |
| Status and diagnostic indicators | LEDs: US1, US2 (power supply), Fail (alarm contact), 2 LEDs per Ethernet port (Link and switchable Activity/Speed/Duplex) |
| Supported browsers | Internet Explorer 5.5 or higher |
| Additional functions | BootP |
| | DHCP-Client |
| Time synchronization | SNTP |

Security functions

| Basic functions | Store-and-forward switch complies with IEEE 802.3 4 priority classes in acc. with IEEE 802.1 P TCP/IP protocol, BootP-capable, port-mirroring, integrated web server function, multicast filtering, IGMP snooping, VLAN, Rapid Spanning Tree (RSTP), PROFINET Device, Media Redundancy Protocol (MRP). |
|---|---|
| Link Layer Discovery Protocol (LLDP) | As per protocol 802.2 |

## Electrical properties

| Current consumption | 190 mA |
|---|---|
| Maximum power dissipation for nominal condition | 4.56 W |
| Test section | 500 V DC 1 min |

| Transmission medium | Copper |
|---|---|

### Supply

| Supply voltage (DC) | 24 V DC (redundant) |
|---|---|
| Supply voltage range | 18 V DC ... 32 V DC |
| Power supply connection | Via COMBICON, max. conductor cross section 2.5 mm² |
| Residual ripple | 3.6 $V_{PP}$ (within the permitted voltage range) |
| Typical current consumption | 200 mA (at $U_S$ = 24 V DC) |
| Current consumption | 190 mA |

### Function

| Signal contact control voltage | 24 V (typical) |
|---|---|
| Signal contact control current | 190 mA (maximum) |

## Connection data

| Connection method | Screw connection |
|---|---|
| Conductor cross section, rigid | 0.2 mm² ... 2.5 mm² |
| Conductor cross section, flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross section AWG | 24 ... 12 |
| Stripping length | 7 mm |

## Environmental and real-life conditions

### Ambient conditions

| Degree of protection | IP20 |
|---|---|
| Ambient temperature (operation) | -40 °C ... 70 °C (non-condensing) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 5 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing) |
| Vibration (operation) | in acc. with IEC 60068-2-6: 5g, 150 Hz |
| Air pressure (operation) | 86 kPa ... 108 kPa (2000 m above mean sea level) |
| Air pressure (storage/transport) | 66 kPa ... 108 kPa (3500 m above sea level) |

## Standards and regulations

| Free from substances that could impair the application of coating | Yes |
|---|---|

## EMC data

| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
|---|---|
| Conformance with EMC directives | IEC 61000-6-2 IEC 61000-4-2 (ESD) Criterion B |
| | IEC 61000-4-3 (electromagnetic fields) Criterion A |
| | IEC 61000-4-4 (burst) Criterion B |
| | IEC 61000-4-5 (surge) Criterion B |
| | IEC 61000-4-6 (immunity to conducted interference) Criterion A |
| Noise immunity | EN 61000-6-2:2005 |

### Noise emission

| Standards/regulations | EN 61000-6-3 |
|---|---|

## System properties

### Functionality

| Basic functions | Store-and-forward switch complies with IEEE 802.3 4 priority classes in acc. with IEEE 802.1 P TCP/IP protocol, BootP-capable, port-mirroring, integrated web server function, multicast filtering, IGMP snooping, VLAN, Rapid Spanning Tree (RSTP), PROFINET Device, Media Redundancy Protocol (MRP). |
|---|---|

### System requirements

| Supported browsers | Internet Explorer 5.5 or higher |
|---|---|

## Signaling

| Status display | LEDs: US1, US2 (power supply), Fail (alarm contact), 2 LEDs per Ethernet port (Link and switchable Activity/Speed/Duplex) |
|---|---|

## Classifications

### UNSPSC

| UNSPSC 21.0 | 43222612 |
|---|---|

## Environmental product compliance

### EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(a)-I, 6(c), 7(a), 7(c)-I |

### China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |

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