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Managed Switch 7000, 8 RJ45 ports 10/100 Mbps, degree of protection: IP20, PROFINET Conformance-Class A, EtherNet/IP TM

Your advantages

- ☑ Device Level Ring (DLR)
- DHCP client, DHCP server (pool-based and port-based), DHCP option 82
- ✓ VI ANs
- ✓ RSTP with fast switch-over



EtherNet/IP

Key Commercial Data

| Packing unit | 1 pc |
|--------------------------------------|-----------------|
| GTIN | 4 046356 749732 |
| GTIN | 4046356749732 |
| Weight per Piece (excluding packing) | 1,000.000 g |
| Custom tariff number | 85176200 |
| Country of origin | Germany |

Technical data

Note

| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|



Technical data

Dimensions

| Width | 60 mm |
|--------|----------|
| Height | 130 mm |
| Depth | 135.5 mm |

Ambient conditions

| Degree of protection | IP20 |
|--|---|
| Ambient temperature (operation) | -40 °C 70 °C |
| Ambient temperature (storage/transport) | -40 °C 85 °C |
| Permissible humidity (operation) | 10 % 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 10 % 95 % (non-condensing) |
| Air pressure (operation) | 86 kPa 108 kPa (1500 m above sea level) |
| Air pressure (storage/transport) | 66 kPa 108 kPa (3500 m above sea level) |

Interfaces

| Interface | Ethernet (RJ45) |
|-------------------------------|-----------------------------------|
| No. of ports | 8 (RJ45 ports) |
| Note on the connection method | Auto negotiation and autocrossing |
| Transmission physics | Copper |
| Transmission speed | 10/100 Mbps |
| Transmission length | 100 m (per segment) |
| Signal LEDs | Data receive, link status |

Function

| Basic functions | Store-and-forward switch, complies with IEEE 802.3 |
|----------------------|--|
| Management | Web-based management (HTTP/HTTPS) |
| | SNMPv1/v2/v3 |
| Diagnostic functions | Remanente Event-Table |
| | RMON History |
| | N:1-Portmirroring |
| | LLDP (Link Layer Discovery Protocol) |
| | SNMP-Traps |
| | ACD (Address Conflict Detection) |
| Filter functions | Quality of Service (8 priority classes) |
| | Port-Priorisierung |
| | VLAN (up to 32 VLANs) |
| | IGMP Snooping/Querier (v1/v2) |
| | Auto-Query-Port |
| | Extended Multicast Filtering |
| | Static Multicast Filtering (32 groups) |



Technical data

Function

| | Link Aggregation (up to 4 trunks) |
|----------------------------------|---|
| Redundancy | DLR (Device Level Ring) |
| | RSTP (Rapid Spanning Tree Protocol) |
| | FRD (Fast Ring Detection) |
| | Large Tree Support |
| Additional functions | MAC-based Port Security |
| MAC address table | 16k |
| IP parameterization | DHCP-Client |
| | DHCP Option 82 (Relay Agent) |
| | DHCP server (pool-based, port-based) |
| | BootP |
| PROFINET device function | Fast Startup |
| PROFINET conformance class | Conformance-Class A |
| EtherNet/IP™ supported protocols | Common Industrial Protocol (CIP) |
| Time synchronization | PTP 1588 (Transparent clock on the DLR ports) |
| Status and diagnostic indicators | LEDs: US1, US2 (power supply), Fail (alarm contact), 2 LEDs per Ethernet port (Link and switchable Activity/Speed/Duplex) EtherNet/IP™ status LED: Net, Mod |
| Signal contact control voltage | 24 V DC (typical) |
| Signal contact control current | 1 A (maximum) |
| | • |

Network expansion parameters

| Cascading depth | Network, linear, and star structure: any |
|---|--|
| Maximum conductor length (twisted pair) | 100 m |

Supply voltage

| Supply voltage | 24 V DC (redundant) |
|-----------------------------|--|
| Residual ripple | 3.6 V _{PP} (within the permitted voltage range) |
| Supply voltage range | 12 V DC 58 V DC |
| Typical current consumption | 350 mA (at U _S = 24 V DC) |
| Current consumption | 350 mA |

General

| Mounting type | DIN rail |
|--------------------|---|
| Type AX | Book type |
| Net weight | 900 g |
| Special properties | EtherNet/IP™ |
| MTTF | 209.8 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day)) |



Technical data

General

| 105.79 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day)) |
|--|
| 14.78 Years (SN 29500 standard, temperature 70 °C, operating cycle 100 % (7 days a week, 24 hours a day)) |

Connection data

| Connection method | Screw connection |
|---------------------------------------|---------------------|
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section flexible min. | 0.2 mm² |
| Conductor cross section flexible max. | 2.5 mm ² |
| Conductor cross section AWG min. | 24 |
| Conductor cross section AWG max. | 12 |
| Stripping length | 7 mm |

Standards and Regulations

| Electromagnetic compatibility | Conformance with EMC Directive 2004/108/EC |
|---|--|
| Type of test | Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 |
| Test result | Operation/Storage/Transport: 5g, 150 Hz, Criterion 3 |
| Noise emission | EN 61000-6-4 |
| Noise immunity | EN 61000-6-2:2005 |
| Vibration (storage/transport) | 5g, 150 Hz, in acc. with IEC 60068-2-6 |
| Free from substances that could impair the application of coating | Yes |
| Vibration (operation) | in acc. with IEC 60068-2-6: 5g, 150 Hz |

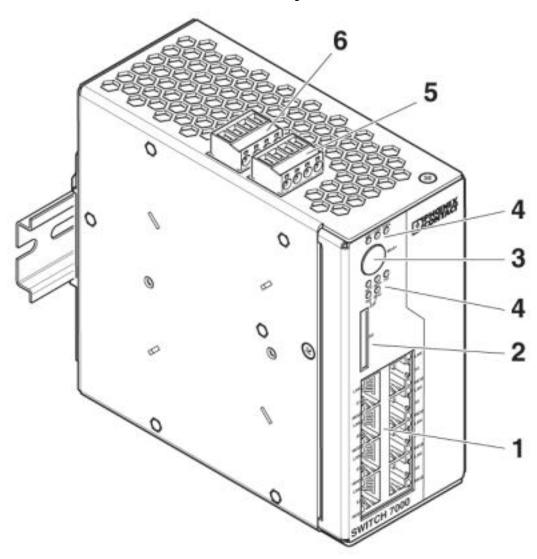
Environmental Product Compliance

| REACh SVHC | Lead 7439-92-1 |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 50 |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Drawings



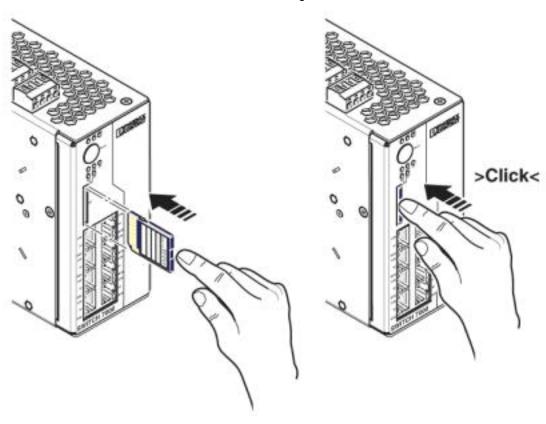




- Key: 1 Ethernet ports
- 2 Slot for optional SD memory card 3 Mode switch with LEDs
- 4 Diagnostics and status indicators
- 5 Connection of the supply voltage 6 Floating signal contact







Inserting/removing the SD card

Classifications

eCl@ss

| eCl@ss 10.0.1 | 19170401 |
|---------------|----------|
| eCl@ss 4.0 | 27250500 |
| eCl@ss 4.1 | 27250500 |
| eCl@ss 5.0 | 19030100 |
| eCl@ss 5.1 | 19030100 |
| eCl@ss 6.0 | 19170100 |
| eCl@ss 7.0 | 19170106 |
| eCl@ss 8.0 | 19170106 |
| eCl@ss 9.0 | 19170106 |

ETIM

| ETIM 3.0 | EC000734 |
|----------|----------|



Classifications

ETIM

| ETIM 4.0 | EC000734 |
|----------|----------|
| ETIM 5.0 | EC000734 |
| ETIM 6.0 | EC000734 |
| ETIM 7.0 | EC000734 |

UNSPSC

| UNSPSC 6.01 | 43172015 |
|---------------|----------|
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11 | 43172015 |
| UNSPSC 12.01 | 43201410 |
| UNSPSC 13.2 | 43222612 |

Approvals

Approvals

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EtherNet/IP CONFORMANCE TESTED TM / UL Listed / cUL Listed / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

| EtherNet/IP CONFORMANCE | 11221.01 |
|-------------------------|----------|
| TESTED TM | 11221.01 |

UL Listed



http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm

FILE E 140324

cUL Listed



http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm

FILE E 140324

cULus Listed





Accessories

Accessories

Data cable preassembled

Patch cable - NBC-R4AC-R4AC-IE8A/.../... - 1411854



Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6_A, cable outlet: straight

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/2,0 - 1408360



Patch cable, CAT6_A, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/3,0 - 1408365



Patch cable, $CAT6_A$, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

Patch cable - NBC-R4AC/1,0-93B/R4AC - 1408968



PROFINET patch cable, shielded, star-quad, 22 AWG stranded (7-wire), green, straight RJ45 male connector/IP20 to straight RJ45 male connector/IP20, length: 1.0 m

Patch cable - NBC-R4AC/2,0-93B/R4AC - 1408969



PROFINET patch cable, shielded, star quad, 22 AWG stranded (7-wire), green, straight RJ45 plug/IP20, to straight RJ45 plug/IP20, length: 2 m



Accessories

Patch cable - NBC-R4AC/5,0-93B/R4AC - 1408970



PROFINET patch cable, shielded, star quad, 22 AWG stranded (7-wire), green, straight RJ45 plug/IP20 to straight RJ45 plug/IP20, length: 5 m

Drivers and interfaces

Software - FL SNMP OPC SERVER V3 - 2701139



SNMP-OPC server, German and English, for monitoring and configuration of SNMP-capable equipment in HMI and SCADA systems

Mounting rail adapter

DIN rail adapter - FL DIN RA - 2891053



The FL DIN RA is installed in a standard, 19-inch rack (EIA-310-D, IEC 60297-3-100) to allow DIN rail mounted equipment to be rack mounted.

Network management software

Software - FL NETWORK MANAGER BASIC - 2702889



FL Network Manager, SNMP-based configuration and firmware update software, for easy startup of Managed Switches

Parameterization memory



Accessories

Memory - SD FLASH 512MB - 2988146



Program and configuration memory, plug-in, 512 Mbyte.

Program / configuration memory - SD FLASH 2GB - 2988162



Program and configuration memory, for extending the internal flash memory, pluggable, 2 GB.

Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

Patch cable - FL CAT5 PATCH 1,0 - 2832276



Patch cable, CAT5, assembled, 1 m

Patch cable - FL CAT5 PATCH 2,0 - 2832289



Patch cable, CAT5, assembled, 2 m



Accessories

Protective cap

Dust protection - FL RJ45 PROTECT CAP - 2832991



Dust protection caps for RJ45 socket

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