

## Industrial Ethernet Switch - SCX 4POE 2T - 1108542

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Smart Camera Box to connect PoE end devices, four PoE ports, two uplink ports (RJ45), integrated Managed Switch and surge protection, supply voltage 100 ... 240 V AC, wall or mast mounting

### Product Description

The Smart Camera Box is used to connect PoE end devices such as IP cameras to a video server. You can use the Smart Camera Box to supply voltage to PoE end devices and additional external devices.

The Smart Camera Box is a manageable outdoor PoE switch with a power supply, a wiring space for the AC voltage supply, replaceable overvoltage protection modules, and an area with an integrated 24 V DC supply and a DIN rail for mounting additional devices.

The Smart Camera Box integrates the functions of conventional connection boxes equipped with standard DIN rail devices into a single compact device. This saves you planning and installation time.


Numerous management and monitoring functions ensure reliable operation of the system.

### Your advantages

- ✓ Cost savings with an all-in-one solution that provides all functions in a single device
- ✓ Significant time savings with adapter for wall and mast mounting
- ✓ Minimal wiring effort
- ✓ Replaceable surge protection
- ✓ A wide range of alarm messages via SNMP, such as in the event of sabotage attempts or defective surge protection
- ✓ Advanced PoE management for reliable operation of IP cameras
- ✓ Quick and easy startup and configuration via web-based management or the FL Network Manager software



### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 063151 015114 |
| GTIN                                 | 4063151015114   |
| Weight per Piece (excluding packing) | 4,300.000 g   |
| Custom tariff number                 | 85176200  |
| Country of origin                    | Germany   |
| Sales Key                            | DNC371  |

# Industrial Ethernet Switch - SCX 4POE 2T - 1108542

## Technical data

### Dimensions

|        |        |
|--------|--------|
| Width  | 284 mm |
| Height | 364 mm |
| Depth  | 121 mm |

### Ambient conditions

|   |  |
|---|--|
| Ambient temperature (operation)         | -40 °C ... 70 °C (>50°C derating)  |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C   |
| Permissible humidity (operation)        | 10 % ... 95 % (non-condensing)   |
| Altitude                                | 2000 m   |
| Degree of protection                    | IP65 (in accordance with DIN EN 60529: Complete touch protection, dust cannot enter, spray water from any direction)                                 |
| Protection class                        | I (Protective grounding of all conductive housing parts)   |
| Noise immunity                          | EN 61000-6-2   |
| Other resistance                        | UV-resistant in accordance with UL746C, f1 listing/rating Outdoor housing, subject to 1,000 hour xenon weather testing, 7-day water submergence test |

### General

|                                     |   |
|-------------------------------------|---|
| Thread type, cable screw connection | 5x M20, 5x M25  |
|                                     | in accordance with UL: 2x M20, 5x M25                                   |
| Tightening torque                   | 2 Nm M20  |
|                                     | 4 Nm M20, UL  |
|                                     | 3.5 Nm M25  |
|                                     | 5 Nm M25, UL  |
| External cable diameter             | 6 mm ... 12 mm (M20)  |
|                                     | 6 mm ... 10 mm (M25)  |
| Electromagnetic compatibility       | Conformance with EMC Directive 2014/30/EU                               |
| Noise emission                      | EN 61000-6-4, Class B, domain of use: residential and small commercial  |
| Mounting type                       | Wall mounting   |
| Net weight                          | 4300 g  |
| Material                            | Polycarbonate PC (Housing)  |
|                                     | Polyamide (Cable gland)   |
|                                     | Neoprene (Cable gland seal, black)                                      |
| Color                               | light gray  |
| MTTF                                | 441 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)    |
|                                     | 224 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) |
|                                     | 92 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)    |

### Power supply

|                      |  |
|----------------------|--|
| Supply voltage range | 100 V AC ... 240 V AC -15 % ... +10 % (Single-phase) |
| Power supply system  | TN   |
|                      | TT   |

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## Technical data

### Power supply

|   |   |
|---|---|
| Protection  | Miniature circuit breaker, 6 A ... 16 A, characteristics B, C, D, K |
|   | Miniature circuit breaker/fuse                                      |
| Connection method   | Push-in spring connection   |
| Conductor cross section flexible, with ferrule without plastic sleeve                     | 0.2 mm² ... 4 mm²   |
| Conductor cross section, flexible, with ferrule, with plastic sleeve                      | 0.2 mm² ... 4 mm²   |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 1.5 mm²   |
| Conductor cross section flexible max.   | 6.00 mm²  |
| Conductor cross section flexible min.   | 0.20 mm²  |
| Conductor cross section solid max.  | 6.00 mm²  |
| Conductor cross section solid min.  | 1.00 mm²  |
| Max. AWG conductor cross section, flexible  | 10  |
| Min. AWG conductor cross section, flexible  | 24  |
| Stripping length  | 10 mm   |

### Interfaces

|                               |   |
|-------------------------------|---|
| Interface 1                   | Ethernet / Fast Ethernet / Gigabit Ethernet           |
| Interface                     | PoE standard IEEE 802.3bt, at, af                     |
| No. of ports                  | 4   |
| Connection method             | RJ45 jack   |
| Note on the connection method | Auto negotiation and autocrossing                     |
| Transmission medium           | Copper  |
| Transmission length           | 100 m (per segment)                                   |
| Basic functions               | Store-and-forward switch, complies with IEEE 802.3    |
| Transmission speed            | 10/100/1000 Mbps                                      |
| Maximum output power          | 165 W (>55°C derating)                                |
|                               | 155 W (If switching output is active, >55°C derating) |
|                               | 90 W (per port POE1...3, >50°C derating)              |
|                               | 30 W (POE4)   |
| Interface 2                   | Ethernet / Fast Ethernet / Gigabit Ethernet           |
| Interface                     | Uplink ports  |
| No. of ports                  | 2   |
| Connection method             | RJ45 jack   |
| Transmission medium           | Copper  |
| Transmission length           | 100 m (per segment)                                   |
| Interface 3                   | Configuration interface                               |
| No. of ports                  | 1   |
| Connection method             | RJ45  |
| Interface 4                   | Switching output                                      |
| Interface                     | Configuration via web-based management                |
| No. of ports                  | 1   |

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## Technical data

### Interfaces

|   |   |
|---|---|
| Connection method   | Push-in spring connection   |
| Conductor cross section flexible max.                                 | 1.5 mm <sup>2</sup>   |
| Conductor cross section flexible min.                                 | 0.2 mm <sup>2</sup>   |
| Conductor cross section solid max.                                    | 1.5 mm <sup>2</sup>   |
| Conductor cross section solid min.                                    | 0.2 mm <sup>2</sup>   |
| Conductor cross section AWG max.                                      | 16  |
| Conductor cross section AWG min.                                      | 24  |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (Stripping length 8 mm)  |
| Conductor cross section, flexible, with ferrule, with plastic sleeve  | 0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> (Stripping length 8 mm) |
| Stripping length  | 10 mm   |
| Load/output load current output                                       | no inductive load   |
| Output nominal voltage  | 24 V DC ±10 % (Supply for devices within the Smart Camera Box)        |
| Output current  | 300 mA (typical)  |

### Function

|                      |                                      |
|----------------------|--------------------------------------|
| Management           | Web-based management (HTTP/HTTPS)    |
|                      | SNMPv2/v3                            |
|                      | Command-line interface (Telnet, SSH) |
| Diagnostic functions | RMON History                         |
|                      | LLDP (Link Layer Discovery Protocol) |
|                      | SNMP traps                           |
|                      | N:1-Portmirroring                    |
|                      | ACD (Address Conflict Detection)     |
| Filter functions     | Port prioritization                  |
|                      | VLAN (up to 32 VLANs)                |
| Redundancy           | RSTP (Rapid Spanning Tree Protocol)  |
|                      | Large Tree Support                   |
|                      | FRD (Fast Ring Detection)            |
| Time synchronization | SNTP (Simple Network Time Protocol)  |
| IP parameterization  | DHCP client                          |
|                      | BootP                                |
|                      | Static IP address                    |
| Additional functions | Jumbo frames                         |

### Conformance/approvals

|                |                              |
|----------------|------------------------------|
| Designation    | CE                           |
| Certificate    | CE-compliant                 |
| Designation    | UL, USA / Canada             |
| Identification | Listed                       |
|                | UL 61010-1, 3rd Edition      |
|                | UL 61010-2-201, 2nd Edition  |
|                | CAN/CSA C22.2 No. 61010-1-12 |

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## Technical data

### Conformance/approvals

|                |                                  |
|----------------|----------------------------------|
|                | CSA C22.2 No. 61010-2-201:18     |
| Designation    | Corrosive gas test               |
| Identification | ISA-S71.04-1985 G3 Harsh Group A |

### Standards and Regulations

|                               |  |
|-------------------------------|--|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU  |
| Type of test                  | Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6   |
| Test result                   | 1g   |
| Type of test                  | Shock in acc. with EN 60068-2-27/IEC 60068-2-27  |
| Test result                   | 15g, 11 ms   |
| Noise emission                | EN 61000-6-4, Class B, domain of use: residential and small commercial   |
| Noise immunity                | EN 61000-6-2   |
| Other resistance              | UV-resistant in accordance with UL746C, f1 listing/rating Outdoor housing, subject to 1,000 hour xenon weather testing, 7-day water submergence test |
| Standards/regulations         | EN 61000-4-2   |
| Contact discharge             | ± 6 kV   |
| Indirect discharge            | ± 6 kV   |
| Standards/regulations         | EN 61000-4-3   |
| Frequency range               | 80 MHz ... 3 GHz (80% amplitude modulation with 1 kHz)   |
| Standards/regulations         | EN 61000-4-4   |
| Comments                      | Criterion B  |
| Standards/regulations         | EN 61000-4-5   |
|                               | EN 61000-6-4   |
|                               | EN 61000-4-6   |
| Frequency range               | 0.15 MHz ... 80 MHz (80% amplitude modulation with 1 kHz)  |
| Conducted noise emission      | EN 61000-6-3 Class B, domain of use: residential and small commercial  |
| Standards/regulations         | IEC 62444  |
| Rated insulation voltage      | 3 kV AC (Input / output, IEC/EN 60950-1)   |
| Pollution degree              | 2  |
| Overvoltage category          | III (With protection modules plugged in)   |
|                               | II (Without protection modules)  |
| Standards/regulations         | IEC 61249-2-21   |

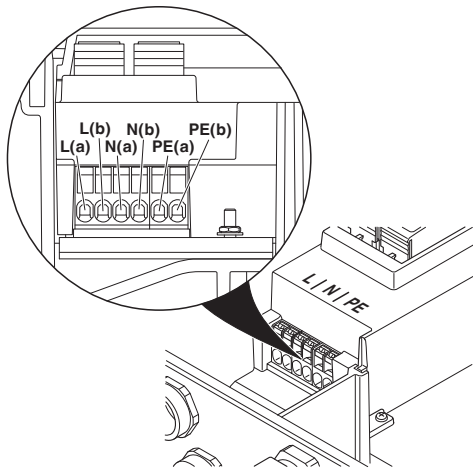
### Environmental Product Compliance

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

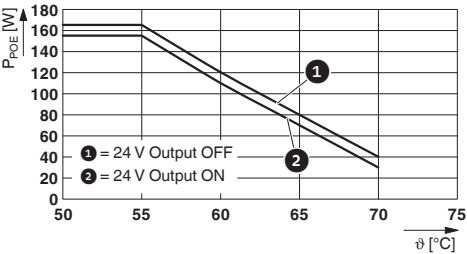
## Drawings

# Industrial Ethernet Switch - SCX 4POE 2T - 1108542

Connection diagram



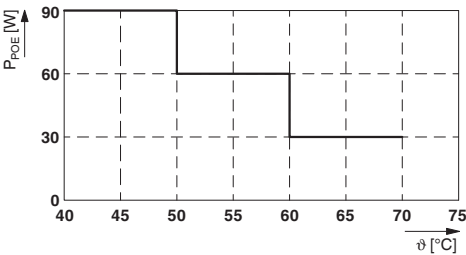
Diagram



Derating (PoE power total)

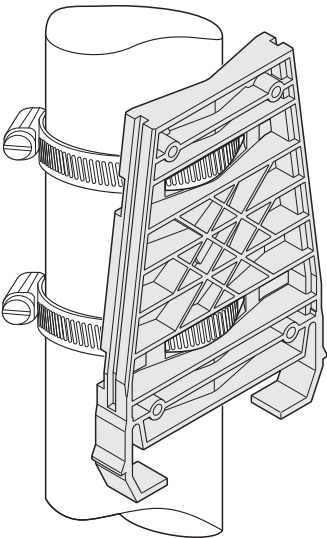
Connecting the supply voltage

Diagram



Derating per port

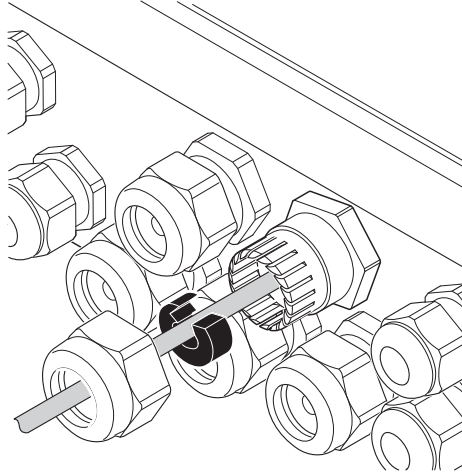
Schematic diagram



Mast mounting

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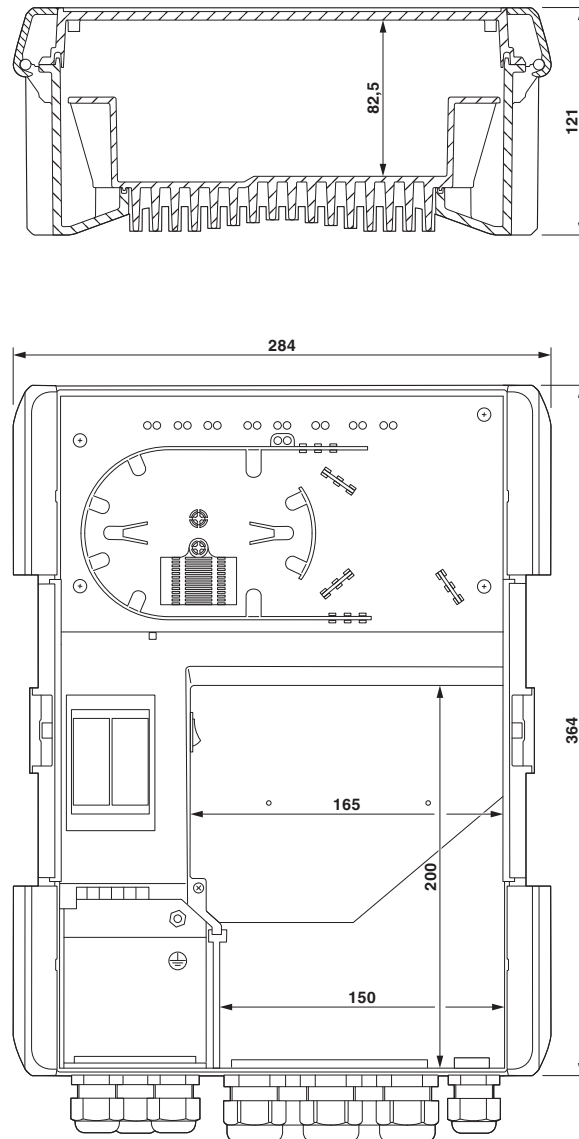
Schematic diagram



Cable gland

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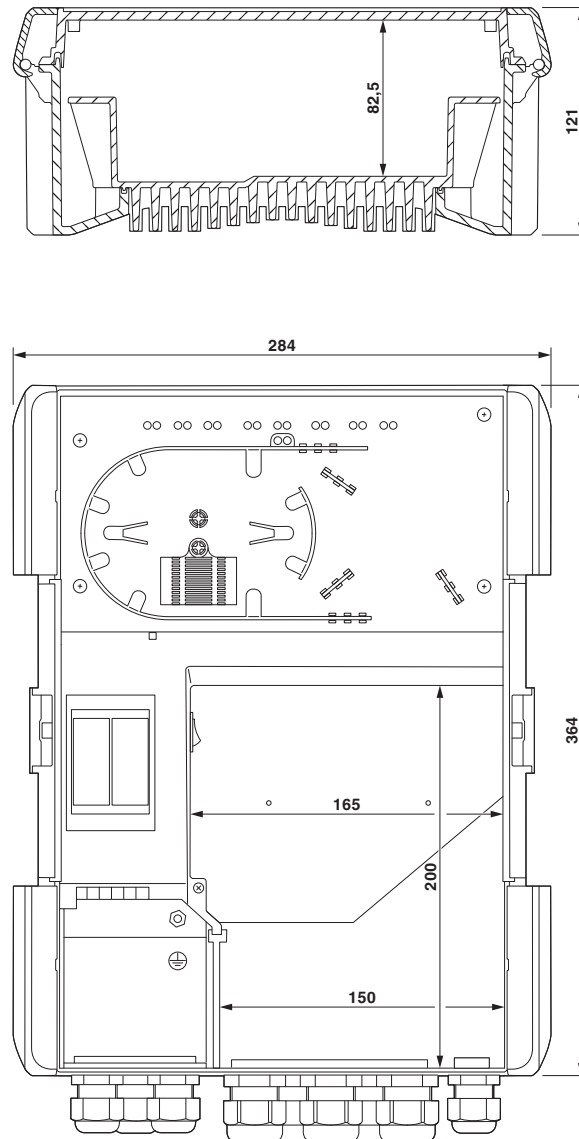
Dimensional drawing





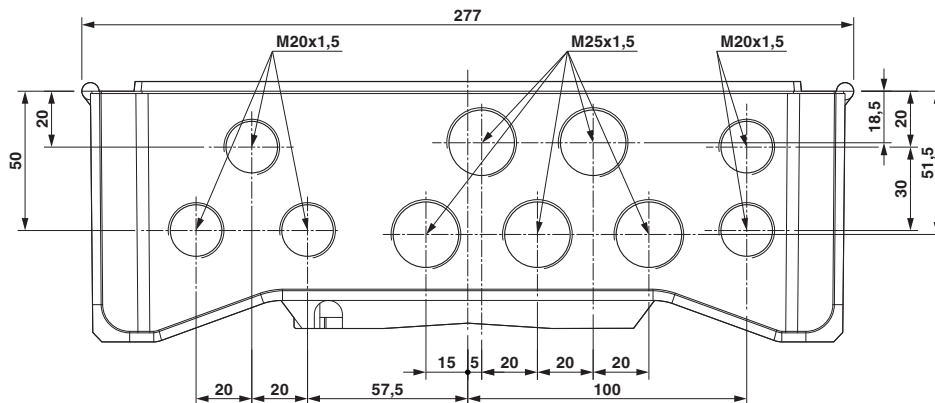
## Industrial Ethernet Switch - SCX 4POE 2T - 1108542

Dimensional drawing

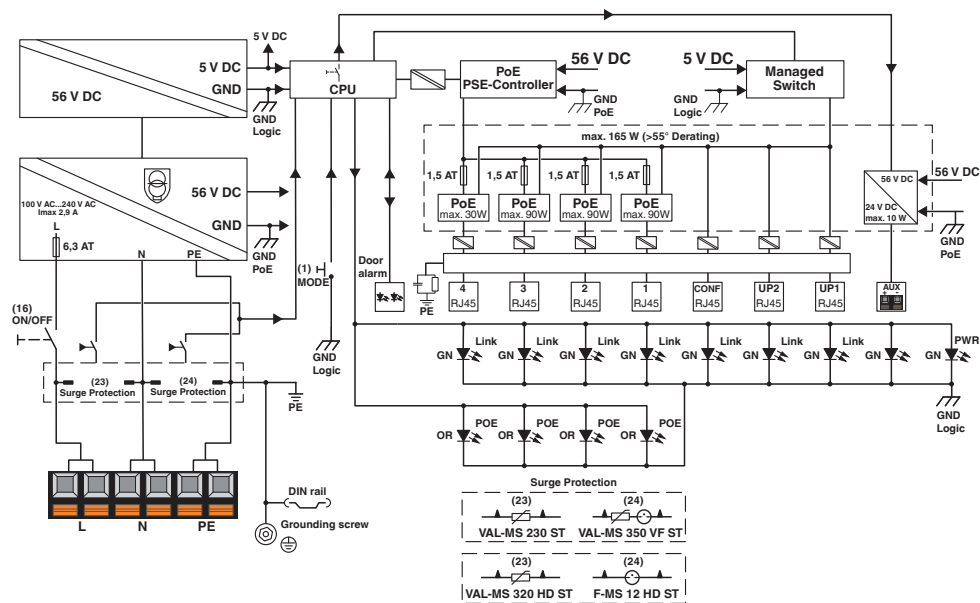


Dimensional drawing

## Dimensional drawing



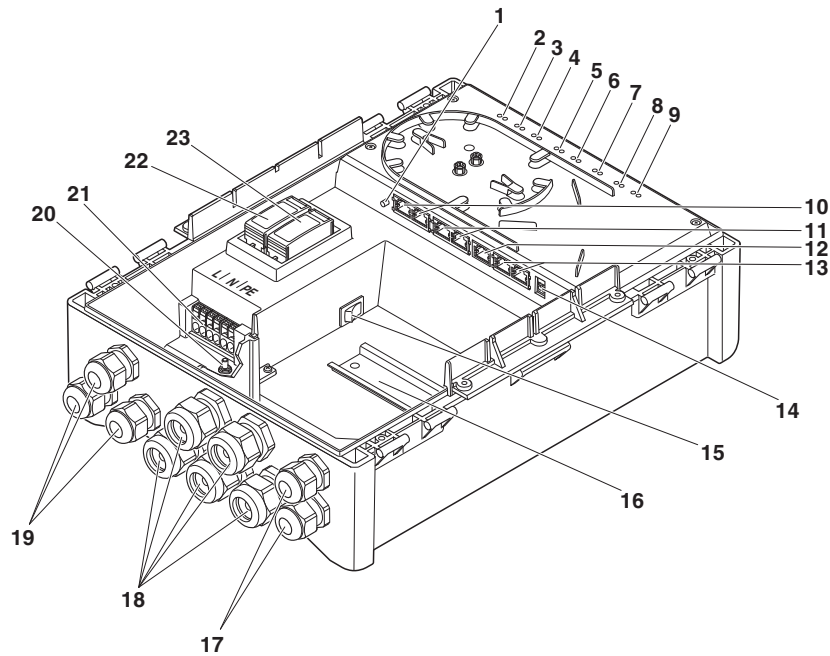
### Circuit diagram



### Basic circuit diagram

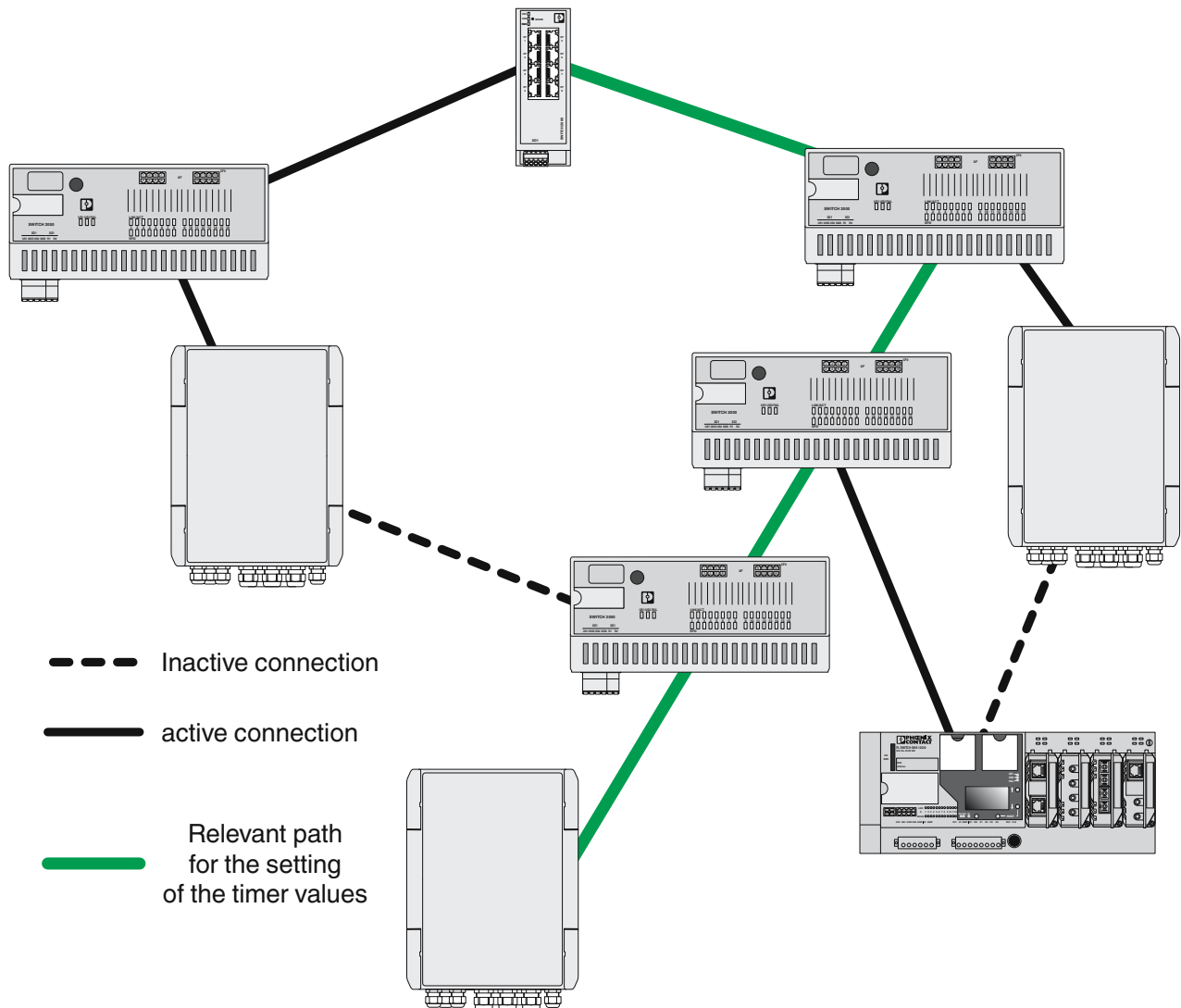
## Industrial Ethernet Switch - SCX 4POE 2T - 1108542

Schematic diagram



## Industrial Ethernet Switch - SCX 4POE 2T - 1108542

Application drawing



## Industrial Ethernet Switch - SCX 4POE 2T - 1108542

### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27180590 |
| eCl@ss 11.0   | 27180590 |
| eCl@ss 9.0    | 27180590 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 7.0 | EC000261 |
|----------|----------|

### Approvals

#### Approvals

#### Approvals

#### cULus Listed

#### Ex Approvals

#### Approval details

|              |   |   |               |
|--------------|---|---|---------------|
| cULus Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
|--------------|---|---|---------------|

### Accessories

#### Accessories

#### Assembly adapter

#### Mounting plate - FL DIN-RAIL ADAPTER 22.5 - 1085485



The FL DIN-RAIL ADAPTER 22.5 is designed to allow products 22.5 mm wide to be mounted flush to a standard 35 mm DIN rail, in any orientation.

#### Mounting plate - FL DIN-RAIL ADAPTER 40 - 1085484



The FL DIN-RAIL ADAPTER 40 is designed to allow products 40 mm wide to be mounted flush to a standard 35 mm DIN rail, in any orientation.

## Industrial Ethernet Switch - SCX 4POE 2T - 1108542

### Accessories

#### Data cable preassembled

Network cable - NBC-R4AC-R4AC-IE8/.../... - 1411842



Network cable, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, cable outlet: straight, Ethernet

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Network cable - NBC-R4AC-R4AC-IE8/.../... - 1411842



Network cable, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, cable outlet: straight, Ethernet

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#### Mounting material

Mast clamp - SCX-CLAMP 14X51-127 - 1175556

Mast clamps, 2 pcs, with quick mounting connection for installation on masts with a diameter of 51 ... 127 mm



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Mast clamp - SCX-CLAMP 14X102-254 - 1188634

Mast clamps, 2 pcs, with quick mounting connection for installation on masts with a diameter of 102 ... 254 mm



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Locking - SCX-DOOR-LOCK - 1184401



Stable door lock with locking tab for securely locking the Smart Camera Box, protects against unauthorized access, for a padlock with a shackle diameter of up to 12 mm

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#### Network management software

# Industrial Ethernet Switch - SCX 4POE 2T - 1108542

## Accessories

Software - FL NETWORK MANAGER BASIC - 2702889



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

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## Replacement plug

Type 2 surge protection plug - F-MS 12 HD ST - 1224885



Replacement plug for the SCX Smart Camera Box for the N-PE path.

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Type 2 surge protection plug - VAL-MS 320 HD ST - 1224886



Replacement plug for the SCX Smart Camera Box for the L-N path.

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Type 2 surge protection plug - VAL-MS 230 ST - 2798844



Surge protection connector type 2 with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 230 V AC

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Type 2 surge protection plug - VAL-MS 350 VF ST - 2856595



Surge protection connector type 2 with series connection consisting of varistor and gas-filled spark gap for VAL-MS base element, thermal monitoring, visual fault warning. Design: 350 V AC