

### Product type designation

### SCALANCE X310

SCALANCE X310, MANAGED PLUS IE SWITCH, 3 X 10/100/1000MBIT/S AND 7 X 10/100MBIT/S RJ45 PORTS, LED-DIAGNOSTICS, FAULT SIGNAL CONTACT WITH SELECT/SET-BUTTON, PROFINET-IO DEVICE, NETWORK-MANAGEMENT, INTEGRATED REDUNDANCY MANAGER, OFFICE FEATURES (RSTP, VLAN, IGMP,..) C-PLUG IN SCOPE OF SUPPLY



### Transmission rate

|               |                                    |
|---------------|------------------------------------|
| Transfer rate | 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s |
|---------------|------------------------------------|

### Interfaces / for communication / integrated

|                                                |    |
|------------------------------------------------|----|
| Number of electrical connections               |    |
| • for network components or terminal equipment | 10 |
| Number of 100 Mbit/s SC ports                  |    |
| • for multimode                                | 0  |
| Number of 1000 Mbit/s LC ports                 |    |
| • for multimode                                | 0  |
| • for single mode (LD)                         | 0  |

### Interfaces / others

|                                  |                       |
|----------------------------------|-----------------------|
| Number of electrical connections |                       |
| • for signaling contact          | 1                     |
| • for power supply               | 1                     |
| • for redundant voltage supply   | 2                     |
| Type of electrical connection    |                       |
| • for signaling contact          | 2-pole terminal block |

|                                 |                       |
|---------------------------------|-----------------------|
| • for power supply              | 4-pole terminal block |
| design of the removable storage |                       |
| • C-PLUG                        | Yes                   |

#### Signal-Inputs/outputs

|                                               |       |
|-----------------------------------------------|-------|
| Operating voltage / of the signaling contacts |       |
| • at DC / Rated value                         | 24 V  |
| Operating current / of the signaling contacts |       |
| • at DC / maximum                             | 0.1 A |

#### Supply voltage, current consumption, power loss

|                                                      |              |
|------------------------------------------------------|--------------|
| Type of voltage supply / redundant power supply unit | No           |
| Type of voltage / of the supply voltage              | DC           |
| Supply voltage                                       |              |
| • external                                           | 24 V         |
| • external                                           | 18 ... 32 V  |
| Product component / fusing at power supply input     | Yes          |
| Fuse protection type / at input for supply voltage   | F 3 A / 32 V |
| Consumed current / maximum                           | 0.4 A        |
| Power loss [W]                                       |              |
| • at DC / at 24 V                                    | 9.6 W        |

#### Permitted ambient conditions

|                                                                |                |
|----------------------------------------------------------------|----------------|
| Ambient temperature                                            |                |
| • during operation                                             | -40 ... +60 °C |
| • during storage                                               | -40 ... +70 °C |
| • during transport                                             | -40 ... +70 °C |
| Relative humidity                                              |                |
| • at 25 °C / without condensation / during operation / maximum | 95 %           |
| Protection class IP                                            | IP30           |

#### Design, dimensions and weight

|                           |                                                                                             |
|---------------------------|---------------------------------------------------------------------------------------------|
| Design                    | compact                                                                                     |
| Width                     | 120 mm                                                                                      |
| Height                    | 125 mm                                                                                      |
| Depth                     | 123 mm                                                                                      |
| Net weight                | 1.4 kg                                                                                      |
| Mounting type             | When used in shipbuilding, installation on a 35 mm standard mounting rail is not permitted. |
| • 19-inch installation    | No                                                                                          |
| • 35 mm DIN rail mounting | Yes                                                                                         |
| • wall mounting           | Yes                                                                                         |
| • S7-300 rail mounting    | Yes                                                                                         |
| • S7-1500 rail mounting   | No                                                                                          |

## Product properties, functions, components / general

|                                                                                |                                                 |
|--------------------------------------------------------------------------------|-------------------------------------------------|
| Cascading in the case of a redundant ring / at reconfiguration time of <~0.3~s | 100                                             |
| Cascading in cases of star topology                                            | any (depending only on signal propagation time) |

## Product functions / management, configuration

|                                                        |     |
|--------------------------------------------------------|-----|
| Product function                                       |     |
| • CLI                                                  | Yes |
| • web-based management                                 | Yes |
| • MIB support                                          | Yes |
| • TRAPs via email                                      | Yes |
| • Configuration with STEP 7                            | Yes |
| • RMON                                                 | Yes |
| • Port mirroring                                       | Yes |
| • multiport mirroring                                  | Yes |
| • CoS                                                  | Yes |
| • PROFINET IO diagnosis                                | Yes |
| • switch-managed                                       | Yes |
| Protocol / is supported                                |     |
| • Telnet                                               | Yes |
| • HTTP                                                 | Yes |
| • HTTPS                                                | Yes |
| • TFTP                                                 | Yes |
| • FTP                                                  | Yes |
| • BOOTP                                                | Yes |
| • GMRP                                                 | Yes |
| • DCP                                                  | Yes |
| • LLDP                                                 | Yes |
| • IGMP (snooping/querier)                              | Yes |
| Identification & maintenance function                  |     |
| • I&M0 - device-specific information                   | Yes |
| • I&M1 – higher-level designation/location designation | Yes |
| Protocol / is supported                                |     |
| • SNMP v1                                              | Yes |
| • SNMP v2                                              | Yes |
| • SNMP v3                                              | Yes |

## Product functions / Diagnosis

|                          |     |
|--------------------------|-----|
| Product function         |     |
| • Port diagnostics       | Yes |
| • Statistics Packet Size | Yes |
| • Statistics packet type | Yes |

- Error statistics
- SysLog

Yes  
Yes

#### Product functions / VLAN

|                                     |     |
|-------------------------------------|-----|
| Product function                    |     |
| • VLAN - port based                 | Yes |
| • VLAN - protocol-based             | No  |
| • VLAN - IP-based                   | No  |
| • VLAN dynamic                      | Yes |
| Number of VLANs / maximum           | 255 |
| Number of VLANs - dynamic / maximum | 255 |
| Protocol / is supported / GVRP      | Yes |

#### Product functions / DHCP

|                  |     |
|------------------|-----|
| Product function |     |
| • DHCP client    | Yes |
| • DHCP Option 82 | Yes |
| • DHCP Option 66 | Yes |
| • DHCP Option 67 | Yes |

#### Product functions / Redundancy

|                                                                |     |
|----------------------------------------------------------------|-----|
| Product function                                               |     |
| • Ring redundancy                                              | Yes |
| • High Speed Redundancy Protocol (HRP)                         | Yes |
| • high speed redundancy protocol (HRP) with redundancy manager | Yes |
| • high speed redundancy protocol (HRP) with standby redundancy | Yes |
| Protocol / is supported / Media Redundancy Protocol (MRP)      | Yes |
| Product function                                               |     |
| • media redundancy protocol (MRP) with redundancy manager      | Yes |
| • redundancy procedure STP                                     | Yes |
| • redundancy procedure RSTP                                    | Yes |
| • redundancy procedure MSTP                                    | Yes |
| • Passive listening                                            | Yes |
| Protocol / is supported                                        |     |
| • STP/RSTP                                                     | Yes |
| • STP                                                          | Yes |
| • RSTP                                                         | Yes |
| • MSTP                                                         | No  |
| • RSTP big network support                                     | Yes |
| • LACP                                                         | Yes |

## Product functions / Security

|                                       |     |
|---------------------------------------|-----|
| Product function                      |     |
| • ACL - MAC-based                     | Yes |
| • ACL - port/MAC-based                | Yes |
| • IEEE 802.1x (radius)                | Yes |
| • Broadcast/Multicast/Unicast Limiter | Yes |
| • broadcast blocking                  | Yes |
| Protocol / is supported               |     |
| • SSH                                 | Yes |

## Product functions / Time

|                             |     |
|-----------------------------|-----|
| Product function            |     |
| • SICLOCK support           | Yes |
| Protocol / is supported     |     |
| • NTP                       | Yes |
| • SNTP                      | Yes |
| • IEEE 1588 profile default | No  |

## Standards, specifications, approvals

|                                                   |                                                                                                                                                       |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard                                          |                                                                                                                                                       |
| • for FM                                          | FM3611: Class 1, Division 2, Group A, B, C, D / T4, Class 1, Zone 2, Group IIC, T4                                                                    |
| • for hazardous zone                              | EN 60079-0 : 2006, EN 60079-15: 2005, II 3 G Ex nA II T4 KEMA 07 ATEX 0145X                                                                           |
| • for safety / from CSA and UL                    | UL 60950-1, CSA C22.2 No. 60950-1                                                                                                                     |
| • for hazardous zone / from CSA and UL            | UL 1604 and UL 2279-15 (Hazardous Location), CSA C22.2 No. 213-M1987, Class 1 / Division 2 / Group A, B, C, D / T4, Class 1 / Zone 2 / Group IIC / T4 |
| • for emitted interference                        | EN 61000-6-4:2007 (Class A)                                                                                                                           |
| • for interference immunity                       | EN 61000-6-2:2005                                                                                                                                     |
| Certificate of suitability / CE marking           | Yes                                                                                                                                                   |
| Certificate of suitability                        | EN 61000-6-2:2005, EN 61000-6-4:2007                                                                                                                  |
| • C-Tick                                          | Yes                                                                                                                                                   |
| • Railway application in accordance with EN 50155 | No                                                                                                                                                    |
| • KC approval                                     | Yes                                                                                                                                                   |
| Marine classification association                 |                                                                                                                                                       |
| • American Bureau of Shipping Europe Ltd. (ABS)   | Yes                                                                                                                                                   |
| • Bureau Veritas (BV)                             | Yes                                                                                                                                                   |
| • Det Norske Veritas (DNV)                        | Yes                                                                                                                                                   |
| • Germanische Lloyd (GL)                          | No                                                                                                                                                    |
| • Lloyds Register of Shipping (LRS)               | Yes                                                                                                                                                   |
| • Nippon Kaiji Kyokai (NK)                        | Yes                                                                                                                                                   |

|                                                |      |
|------------------------------------------------|------|
| • Polski Rejestr Statkow (PRS)                 | No   |
| • Royal Institution of Naval Architects (RINA) | No   |
| MTBF / at 40 °C                                | 40 y |

#### Further Information / Internet Links

|                                                   |                                                                                                     |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Internet-Link                                     |                                                                                                     |
| • to website: Selector SIMATIC NET SELECTION TOOL | <a href="http://www.siemens.com/snst">http://www.siemens.com/snst</a>                               |
| • to website: Industrial communication            | <a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a>                 |
| • to website: Industry Mall                       | <a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a>                   |
| • to website: Information and Download Center     | <a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a> |
| • to website: Image database                      | <a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a>             |
| • to website: CAx Download Manager                | <a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a>                                 |
| • to website: Industry Online Support             | <a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>             |

#### Security information

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