



SCALANCE X320-1FE managed IE switch, 20x 10/100 Mbit/s RJ45 ports, 1x 100 Mbit/s SC Port multimode LED-diagnostics, error-signaling contact with Select/set pushbutton, PROFINET IO Device, network management, integrated redundancy manager, Office features (RSTP, VLAN, IGMP,...) C-plug in scope of delivery .

<b>product type designation</b>	<b>SCALANCE X320-1FE</b>
<b>transfer rate</b>	
transfer rate	10 Mbit/s, 100 Mbit/s
<b>interfaces / for communication / integrated</b>	
number of electrical connections • for network components or terminal equipment	20
number of 10/100 Mbit/s RJ45 ports / integrated • with securing collar	20
number of 100 Mbit/s SC ports • for multimode	1
<b>interfaces / other</b>	
number of electrical connections • for signaling contact	1
• for power supply	1
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
<b>signal inputs/outputs</b>	
operating voltage / of the signaling contacts • at DC / rated value	24 V
operational current / of the signaling contacts • at DC / maximum	0.1 A
<b>supply voltage, current consumption, power loss</b>	
product component / connection for redundant voltage supply	Yes
type of voltage supply / redundant power supply unit	No
<b>type of voltage / 1 / of the supply voltage</b> • supply voltage / 1 / rated value	24 V
• power loss [W] / 1 / rated value	9.6 W
• supply voltage / 1 / rated value	18 ... 32 V
• consumed current / 1 / maximum	0.4 A
• type of electrical connection / 1 / for power supply	4-pole terminal block
• product component / 1 / fusing at power supply input	Yes
<b>ambient conditions</b>	
ambient temperature • during operation	-40 ... +60 °C
• during storage	-40 ... +70 °C

<ul style="list-style-type: none"> <li>during transport</li> </ul>	-40 ... +70 °C
relative humidity <ul style="list-style-type: none"> <li>at 25 °C / without condensation / during operation / maximum</li> </ul>	95 %
protection class IP	IP30
<b>design, dimensions and weights</b>	
design	compact
width	180 mm
height	125 mm
depth	123 mm
net weight	1.65 kg
fastening method	When used in shipbuilding, installation on a 35 mm standard mounting rail is not permitted.
<ul style="list-style-type: none"> <li>19-inch installation</li> <li>35 mm top hat DIN rail mounting</li> <li>wall mounting</li> <li>S7-300 rail mounting</li> <li>S7-1500 rail mounting</li> </ul>	No Yes Yes Yes No
<b>product features, product functions, product components / general</b>	
cascading in the case of a redundant ring / at reconfiguration time of <math>\lt;0.3\text{s}</math>	100
cascading in cases of star topology	any (depending only on signal propagation time)
<b>product functions / management, configuration, engineering</b>	
product function	
<ul style="list-style-type: none"> <li>CLI</li> <li>web-based management</li> <li>MIB support</li> <li>TRAPs via email</li> <li>configuration with STEP 7</li> <li>RMON</li> <li>port mirroring</li> <li>multiport mirroring</li> <li>CoS</li> <li>PROFINET IO diagnosis</li> </ul>	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
PROFINET conformity class	B
product function / switch-managed	Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>Telnet</li> <li>HTTP</li> <li>HTTPS</li> <li>TFTP</li> <li>FTP</li> <li>BOOTP</li> <li>GMRP</li> <li>DCP</li> <li>LLDP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> </ul>	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
identification & maintenance function	
<ul style="list-style-type: none"> <li>I&amp;M0 - device-specific information</li> <li>I&amp;M1 – higher level designation/location designation</li> </ul>	Yes Yes
<b>product functions / diagnostics</b>	
product function	
<ul style="list-style-type: none"> <li>port diagnostics</li> <li>statistics Packet Size</li> <li>statistics packet type</li> <li>error statistics</li> <li>SysLog</li> </ul>	Yes Yes Yes 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
• Parallel Redundancy Protocol (PRP)/operation in the PRP-network	Yes
• Parallel Redundancy Protocol (PRP)/Redundant Network Access (RNA)	No
• passive listening	Yes
protocol / is supported	
• STP/RSTP	Yes
• STP	Yes
• RSTP	Yes
• MSTP	Yes
• 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	
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<ul style="list-style-type: none"> <li>• for FM</li> </ul>	FM3611: Class 1, Division 2, Group A, B, C, D / T4, Class 1, Zone 2, Group IIC, T4
<ul style="list-style-type: none"> <li>• for safety / from CSA and UL</li> </ul>	UL 60950-1, CSA C22.2 No. 60950-1
<ul style="list-style-type: none"> <li>• for emitted interference</li> </ul>	EN 61000-6-4:2007 (Class A)
<ul style="list-style-type: none"> <li>• for interference immunity</li> </ul>	EN 61000-6-2:2005
MTBF	25 y
reference code	
<ul style="list-style-type: none"> <li>• according to IEC 81346-2</li> </ul>	KF
<ul style="list-style-type: none"> <li>• according to IEC 81346-2:2019</li> </ul>	KFE
<b>standards, specifications, approvals / CE</b>	
certificate of suitability / CE marking	Yes
<b>standards, specifications, approvals / hazardous environments</b>	
standard / for hazardous zone	EN 60079-0 : 2006, EN 60079-15: 2005, II 3 G Ex nA II T4 KEMA 07 ATEX 0145X
<ul style="list-style-type: none"> <li>• from CSA and UL</li> </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
certificate of suitability	
<ul style="list-style-type: none"> <li>• CCC / for hazardous zone according to GB standard</li> </ul>	Yes
<b>standards, specifications, approvals / other</b>	
certificate of suitability	EN 61000-6-2:2005, EN 61000-6-4:2007
<ul style="list-style-type: none"> <li>• C-Tick</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• KC approval</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• railway application in accordance with EN 50155</li> </ul>	No
<b>standards, specifications, approvals / marine classification</b>	
Marine classification association	
<ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Det Norske Veritas (DNV)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Germanische Lloyd (GL)</li> </ul>	No
<ul style="list-style-type: none"> <li>• DNV GL</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Nippon Kaiji Kyokai (NK)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Polski Rejestr Statkow (PRS)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Royal Institution of Naval Architects (RINA)</li> </ul>	Yes
<b>further information / internet-Links</b>	
Internet-Link	
<ul style="list-style-type: none"> <li>• to web page: selection aid TIA Selection Tool</li> </ul>	<a href="http://www.siemens.com/tia-selection-tool">http://www.siemens.com/tia-selection-tool</a>
<ul style="list-style-type: none"> <li>• to website: Industrial communication</li> </ul>	<a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a>
<ul style="list-style-type: none"> <li>• to website: Industry Mall</li> </ul>	<a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a>
<ul style="list-style-type: none"> <li>• to website: Information and Download Center</li> </ul>	<a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a>
<ul style="list-style-type: none"> <li>• to website: Image database</li> </ul>	<a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a>
<ul style="list-style-type: none"> <li>• to website: CAx-Download-Manager</li> </ul>	<a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a>
<ul style="list-style-type: none"> <li>• to website: Industry Online Support</li> </ul>	<a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>
<b>security information</b>	
security information	Siemens provides products and solutions with industrial security functions that support the secure operation of plants, solutions, machines, equipment and/or networks. They are important components in a holistic industrial security concept. With this in mind, Siemens' products and solutions undergo continuous development. Siemens recommends strongly that you regularly check for product updates. For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action(e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visit <a href="http://www.siemens.com/industrialsecurity">http://www.siemens.com/industrialsecurity</a> . To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit <a href="http://support.automation.siemens.com">http://support.automation.siemens.com</a> . (V3.4)

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