## **SIEMENS**

## Data sheet

## 6GK5216-0BA00-2FC2



SCALANCE XC216EEC Manageable layer 2 IE switch; 16x 10/100 Mbit/s RJ45 ports; 1x console port; Diagnostics LED; Redundant power supply; with painted printed circuit boards; NAMUR NE21-compliant; Temp. range -40 °C to +70 °C Mounting: Standard mounting rail/S7 mounting rail/wall; Redundancy functions; Office features (RSTP, VLAN,...); PROFINET IO device; Ethernet/IP-compliant; C-PLUG slot;

Product type designation	SCALANCE XC216EEC
Transfer rate	
Transfer rate	10 Mbit/s, 100 Mbit/s
Interfaces / for communication / Integrated	
Number of electrical connections	
<ul> <li>for network components or terminal equipment</li> </ul>	16; RJ45
Number of 10/100 Mbit/s RJ45 ports / Integrated	
<ul><li>with securing collar</li></ul>	16
Interfaces / other	
Number of electrical connections	
• for operator console	1
<ul> <li>for signaling contact</li> </ul>	1
<ul><li>for power supply</li></ul>	1
<ul> <li>for redundant voltage supply</li> </ul>	1
Type of electrical connection	
• for operator console	RJ11
<ul> <li>for signaling contact</li> </ul>	2-pole terminal block
• for power supply	4-pole terminal block

design of the removable storage	u.
• 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 / of the supply voltage	DC
Supply voltage	
• external	24 V
external / minimum	9.6 V
• external / maximum	31.2 V
Supply voltage / 4 / Rated value	
<ul> <li>Consumed current / 4 / at rated supply voltage / maximum</li> </ul>	0.275 A
Product component / fusing at power supply input	Yes
Fuse protection type / at input for supply voltage	2.5 A / 125 V
Consumed current / maximum	0.55 A
Power loss [W]	
• at DC / at 24 V	6.6 W
Ambient conditions	
Ambient temperature	
<ul><li>during operation</li></ul>	-40 +70 °C
during storage	-40 +85 °C
during transport	-40 +85 °C
Relative humidity	
<ul> <li>at 25 °C / without condensation / during operation / maximum</li> </ul>	95 %
Protection class IP	IP20
	11 20
Design, dimensions and weights	
Design	compact
Width	120 mm
Height	147 mm
Depth	125 mm
Net weight	0.8 kg
Product feature / conformal coating	Yes
Material / of the enclosure	Polycarbonate (PC-GF10) / pressure die cast aluminum
Mounting type	
<ul> <li>35 mm DIN rail mounting</li> </ul>	Yes
wall mounting	Yes

• S7-300 rail mounting	Yes
• S7-1500 rail mounting	Yes

Product features, product functions, product components / general	
Cascading in the case of a redundant ring / at	50
reconfiguration time of <\~0.3\~s	
Cascading in cases of star topology	any (depending only on signal propagation time)
Product function / QoS according to DSCP	Yes
Product feature	
<ul> <li>Cut Through switching method</li> </ul>	No
<ul> <li>Store &amp; Forward switching method</li> </ul>	Yes

Product functions  CLI  Web-based management  MIB support  TRAPs via email  Configuration with STEP 7  RMON  SMTP server  Port mirroring  Multiport mirroring  COS  PROFINET IO diagnosis  PROFINET conformity class  Product function / switch-managed  Telegram length / for Ethernet / maximum  Protocol / is supported  Telnet  HTTP  HTTP  PROFINET  BOOTP  BOOTP  BOOTP  COP  LLDP  EtherNet/IP  SMMP v2  SMMP v3  Identification & maintenance function		
		engineering
web-based management     MIB support     Yes     TRAPs via email     Configuration with STEP 7     RMON     SMTP server     Port mirroring     Port mirroring     Yes     PROFINET IO diagnosis     PROFINET conformity class     PROduct function / switch-managed     Telegram length / for Ethernet / maximum     Telnet     HTTP     HTTPS     HTTPS     TFIP     BOOTP     BOMRP     DCP     LLDP     EtherNet/IP     SNMIP v1     SNMIP v2     SNMIP v3     IGMP (snooping/querier)     Yes     SNMIP v3     IGMP (snooping/querier)     Yes     SNMIP v3     Ves     SNMIP v3     Yes		Vac
• MIB support         Yes           • TRAPs via email         Yes           • Configuration with STEP 7         Yes           • RMON         Yes           • SMTP server         No           • Port mirroring         Yes           • multiport mirroring         Yes           • CoS         Yes           • PROFINET IO diagnosis         Yes           PROFINET conformity class         B           Product function / switch-managed         Yes           Telegram length / for Ethernet / maximum         1632 byte           Protocol / is supported         **           • Telnet         Yes           • HTTP         Yes           • HTTP         Yes           • TFTP         Yes           • BOOTP         No           • GMRP         Yes           • DCP         Yes           • LLDP         Yes           • EtherNet/IP         Yes           • SNMP v1         Yes           • SNMP v3         Yes           • IGMP (snooping/querier)         Yes		
• TRAPs via email • Configuration with STEP 7 • RMON • SMTP server • No • Port mirroring • multiport mirroring • CoS • PROFINET IO diagnosis • PROFINET conformity class Product function / switch-managed • Telegram length / for Ethernet / maximum • Telnet • Telnet • Telnet • HTTP • HTTPS • HTTPS • BOOTP • BOOTP • GMRP • DCP • LLDP • EtherNet/IP • SNMP v1 • SNMP v2 • SNMP v3 • IGMP (snooping/querier) • Yes • IGMP (snooping/querier) • Yes • IGMP (snooping/querier) • Yes • IGMP (snooping/querier)		
Configuration with STEP 7     RMON     Yes     No     SMTP server     No     Port mirroring     Yes     multiport mirroring     Yes     PROFINET IO diagnosis     Yes     PROFINET conformity class     Product function / switch-managed     Telegram length / for Ethernet / maximum     1632 byte  Protocol / is supported     Telnet     HTTP     Yes     HTTPS     Yes     TFTP     BOOTP     BOOTP     CGMRP     CGN     SMMP ∨1     SNMP ∨2     SNMP ∨3     IGMP (snooping/querier)     No     CGN     Yes     No     Ves     No     Configuration with STEP 7     No     Ves     Ves     No     Ves     No     Configuration with STEP 7     No     No     Configuration with STEP 7     No     Ves     SNMP ∨3     IGMP (snooping/querier)     Ves     SMMP ∨1     SNMP ∨3     IGMP (snooping/querier)     Ves     SMMP ∨3     IGMP (snooping/querier)     Ves     SMMP ∨3     IGMP (snooping/querier)     Ves     SMMP ∨3     Ves     SMMP ∨3     Ves     SMMP ∨3     Ves     Con     Ves     Ves     SMMP ∨3     Ves     SMMP ∨3     Ves     IGMP (snooping/querier)     Ves     SMMP ∨3     Ves     Con     Ves     Ves     SMMP ∨3     Ves     Ves     Con     Ves     Ves     Ves     Ves     Ves     Con     Ves     Ves     Con     Ves     Ves     Con     Con     Ves     Con     Con     Con     Ves     Con     Con     Con     Ves     Con     Con		
• RMON         Yes           • SMTP server         No           • Port mirroring         Yes           • multiport mirroring         Yes           • CoS         Yes           • PROFINET IO diagnosis         Yes           PROFINET conformity class         B           Product function / switch-managed         Yes           Telegram length / for Ethernet / maximum         1632 byte           Protocol / is supported         Yes           • Telnet         Yes           • HTTP         Yes           • HTTPS         Yes           • TFTP         Yes           • BOOTP         No           • GMRP         Yes           • LLDP         Yes           • EtherNet/IP         Yes           • SNMP v1         Yes           • SNMP v2         Yes           • SNMP v3         Yes           • IGMP (snooping/querier)         Yes		
SMTP server     Port mirroring     Yes     multiport mirroring     Yes     Yes     PROFINET IO diagnosis     Yes     PROFINET conformity class     Product function / switch-managed     Telegram length / for Ethernet / maximum     Telnet     Telnet     Yes     HTTP     Yes     HTTPS     Yes     TFTP     Yes     BOOTP     No     GMRP     Yes     LLDP     Yes     EtherNet/IP     SNMP v1     SNMP v3     IGMP     SMMP v3     IGMP     SMMP v3     IGMP     SMMP vas     IGMP     Yes     IGMP     Yes     SNMP v3     IGMP     Yes     IGMP     Yes     IGMP     Yes     SNMP v3     IGMP     Yes     IGMP     Yes     SNMP vas     IGMP (snooping/querier)     Yes     IGMP     Yes     SMMP vas     IGMP (snooping/querier)     Yes     IGMP (snooping/querier)     Yes     IGMP vas     IGMP vas		
● Port mirroring         Yes           ● multiport mirroring         Yes           ● CoS         Yes           ● PROFINET IO diagnosis         Yes           PROFINET conformity class         B           Product function / switch-managed         Yes           Telegram length / for Ethernet / maximum         1632 byte           Protocol / is supported         Yes           ● Telnet         Yes           ● HTTP         Yes           ● HTTPS         Yes           ● BOOTP         No           ● GMRP         Yes           ● DCP         Yes           ● LLDP         Yes           ● EtherNet/IP         Yes           ● SNMP v1         Yes           ● SNMP v2         Yes           ● SNMP v3         Yes           ● IGMP (snooping/querier)         Yes		
<ul> <li>multiport mirroring</li> <li>CoS</li> <li>Yes</li> <li>PROFINET IO diagnosis</li> <li>Yes</li> <li>PROFINET conformity class</li> <li>B</li> <li>Product function / switch-managed</li> <li>Yes</li> <li>Telegram length / for Ethernet / maximum</li> <li>1632 byte</li> <li>Protocol / is supported</li> <li>Telnet</li> <li>Yes</li> <li>HTTP</li> <li>HTTPS</li> <li>Yes</li> <li>TFTP</li> <li>BOOTP</li> <li>GMRP</li> <li>OCP</li> <li>LLDP</li> <li>EtherNet/IP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> </ul>		
	Port mirroring	
● PROFINET IO diagnosis         Yes           PROFINET conformity class         B           Product function / switch-managed         Yes           Telegram length / for Ethernet / maximum         1632 byte           Protocol / is supported         **           • Telnet         Yes           • HTTP         Yes           • HTTPS         Yes           • TFTP         Yes           • BOOTP         No           • GMRP         Yes           • LLDP         Yes           • EtherNet/IP         Yes           • SNMP v1         Yes           • SNMP v2         Yes           • SNMP v3         Yes           • IGMP (snooping/querier)         Yes	<ul><li>multiport mirroring</li></ul>	
PROFINET conformity class  Product function / switch-managed  Telegram length / for Ethernet / maximum  Protocol / is supported  • Telnet  • Telnet  • HTTP  Yes  • HTTPS  • HTTPS  • BOOTP  • BOOTP  • BOCP  • LLDP  • EtherNet/IP  • SNMP v1  • SNMP v2  • IGMP (snooping/querier)  Protocol / switch-managed  Yes  1632 byte  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Y	• CoS	Yes
Product function / switch-managed         Yes           Telegram length / for Ethernet / maximum         1632 byte           Protocol / is supported         Yes           • Telnet         Yes           • HTTP         Yes           • HTTPS         Yes           • TFTP         Yes           • BOOTP         No           • GMRP         Yes           • DCP         Yes           • LLDP         Yes           • EtherNet/IP         Yes           • SNMP v1         Yes           • SNMP v2         Yes           • SNMP v3         Yes           • IGMP (snooping/querier)         Yes	<ul> <li>PROFINET IO diagnosis</li> </ul>	Yes
Telegram length / for Ethernet / maximum  Protocol / is supported  • Telnet  • HTTP  • HTTP  • HTTPS  • TFTP  • BOOTP  • BOOTP  • DCP  • LLDP  • EtherNet/IP  • SNMP v1  • SNMP v2  • SNMP v3  • IGMP  • IGMP  • GMRP  • SNMP v3  • IGMP (snooping/querier)  1632 byte  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Y	PROFINET conformity class	В
Protocol / is supported  • Telnet  • HTTP  • HTTPS  • HTTPS  • TFTP  • BOOTP  • BOOTP  • BOCP  • LLDP  • LLDP  • EtherNet/IP  • SNMP v1  • SNMP v2  • SNMP v3  • IGMP (snooping/querier)	<del>-</del>	Yes
<ul> <li>Telnet</li> <li>HTTP</li> <li>Yes</li> <li>HTTPS</li> <li>Yes</li> <li>TFTP</li> <li>BOOTP</li> <li>BOOTP</li> <li>OGMRP</li> <li>Yes</li> <li>DCP</li> <li>LLDP</li> <li>EtherNet/IP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>Yes</li> <li>Yes</li> <li>IGMP (snooping/querier)</li> </ul>		1632 byte
<ul> <li>HTTP</li> <li>HTTPS</li> <li>Yes</li> <li>TFTP</li> <li>BOOTP</li> <li>GMRP</li> <li>DCP</li> <li>LLDP</li> <li>EtherNet/IP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> </ul>	Protocol / is supported	
<ul> <li>HTTPS</li> <li>Yes</li> <li>TFTP</li> <li>BOOTP</li> <li>BOOTP</li> <li>GMRP</li> <li>DCP</li> <li>LLDP</li> <li>EtherNet/IP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>Yes</li> <li>Yes</li> <li>IGMP (snooping/querier)</li> </ul>	Telnet	Yes
<ul> <li>TFTP</li> <li>BOOTP</li> <li>GMRP</li> <li>DCP</li> <li>LLDP</li> <li>EtherNet/IP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>Yes</li> </ul>	• HTTP	Yes
<ul> <li>BOOTP</li> <li>GMRP</li> <li>DCP</li> <li>LLDP</li> <li>EtherNet/IP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>No</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>	• HTTPS	Yes
<ul> <li>GMRP</li> <li>DCP</li> <li>LLDP</li> <li>EtherNet/IP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>	• TFTP	Yes
<ul> <li>DCP</li> <li>LLDP</li> <li>EtherNet/IP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>	• BOOTP	No
<ul> <li>LLDP</li> <li>EtherNet/IP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>	• GMRP	Yes
<ul> <li>EtherNet/IP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>	• DCP	Yes
<ul> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>Yes</li> <li>Yes</li> </ul>	• LLDP	Yes
<ul> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>Yes</li> <li>Yes</li> </ul>	• EtherNet/IP	Yes
<ul> <li>SNMP v2</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> <li>Yes</li> <li>Yes</li> </ul>	• SNMP v1	Yes
• IGMP (snooping/querier) Yes	• SNMP v2	Yes
• IGMP (snooping/querier) Yes	• SNMP v3	Yes
	<ul> <li>IGMP (snooping/querier)</li> </ul>	Yes

I&M0 - device-specific information	Yes
<ul> <li>I&amp;M1 – higher-level designation/location</li> </ul>	Yes
designation	
Product functions / Diagnostics	
Product function	
<ul> <li>Port diagnostics</li> </ul>	Yes
Statistics Packet Size	Yes
<ul> <li>Statistics packet type</li> </ul>	Yes
• Error statistics	Yes
<ul> <li>SysLog</li> </ul>	Yes
Product functions / VLAN	
Product function	
<ul> <li>VLAN - port based</li> </ul>	Yes
<ul> <li>VLAN - protocol-based</li> </ul>	No
• VLAN - IP-based	No
Number of VLANs / maximum	257
Number of VLANs - dynamic / maximum	257
Protocol / is supported / GVRP	Yes
Product functions / DHCP	
Product function	
DHCP server	Yes
DHCP client	Yes
<ul> <li>DHCP Option 82</li> </ul>	Yes
<ul> <li>DHCP Option 66</li> </ul>	Yes
DHCP Option 67	Yes
Product functions / redundancy	
Product function	
<ul> <li>of the PROFINET IO device / is supported / PROFINET system redundancy (S2)</li> </ul>	Yes
Ring redundancy	Yes
High Speed Redundancy Protocol (HRP)	Yes
<ul> <li>high speed redundancy protocol (HRP) with redundancy manager</li> </ul>	Yes
<ul> <li>high speed redundancy protocol (HRP) with standby redundancy</li> </ul>	Yes
Protocol / is supported / Media Redundancy Protocol (MRP)	Yes
Product function	
<ul> <li>media redundancy protocol (MRP) with redundancy manager</li> </ul>	Yes

<ul> <li>of the PROFINET IO device / is supported / H- Sync forwarding</li> </ul>	Yes
• redundancy procedure STP	Yes
• redundancy procedure RSTP	Yes
redundancy procedure MSTP	Yes
<ul> <li>Parallel Redundancy Protocol (PRP)/operation in the PRP-network</li> </ul>	Yes
<ul> <li>Parallel Redundancy Protocol</li> <li>(PRP)/Redundant Network Access (RNA)</li> </ul>	No
Passive listening	Yes
Protocol / is supported	
• LACP	Yes
Product functions / Security	
Product function	
• IEEE 802.1x (radius)	Yes
<ul> <li>Broadcast/Multicast/Unicast Limiter</li> </ul>	Yes
<ul><li>broadcast blocking</li></ul>	Yes
Protocol / is supported	
• SSH	Yes
• SSL	Yes
Product functions / time	
Product function	
<ul> <li>SICLOCK support</li> </ul>	Yes
NTP-client	Yes
SNTP client	Yes
Protocol / is supported	
• NTP	Yes
• SNTP	Yes
System modification during operation	
Product function / configuration in RUN via CiR/H-CiR	Yes
Standards, specifications, approvals	
Security for industrial automation and control	Yes
systems / acc. to IEC 62443-4-2:2019	
MTBF	48 y
Standards, specifications, approvals / CE	
Certificate of suitability / CE marking	Yes
Product conformity / according to EMC-guideline	2014/30/EU
Standard	
• for EMC interference emission	EN 61000-6-4, EN 50121-11
• for immunity to EMI	EN 61000-6-2, EN 50121-11

Yes; 2011/65/EU

## Security information

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. Thirdparty products that may be in use should also be considered. For more information about industrial security, visit http://www.siemens.com/industrialsecurity. To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit http://support.automation.siemens.com. (V3.4)

last modified:

05/13/2020