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Data sheet 6GK5216-0YA00-5ES6



SCALANCE XP216G PoE EEC, layer 2 IE switch, railway approval, 12x 100/1000 Mbps 4x 10 Gbps, M12 ports, 802.3at/bt, 8x30 W 8x60 W (max. 240 W), LED diagnostics, error signaling contact, redundant power supply, PROFINET IO device, network management, can be operated in redundant ring, including dust caps, including IP65, -40 °C to +70 °C, C-PLUG optional.

product type designation	
product brand name	SCALANCE
product type designation	XP216G PoE EEC
Technical Product Detail Page	https://i.siemens.com/1P6GK5216-0YA00-5ES6
transfer rate	
transfer rate	10, 100, 1000 Mbit/s
transfer rate	2.5, 5, 10 Gbit/s
interfaces / for communication / integrated	
number of electrical connections	
● for network components or terminal equipment	16; M12
number of 10/100/1000 Mbit/s M12-ports (X-coded)	
● with PoE	12
number of 10 Gbit/s M12-Ports (X-coded)	
● with PoE	4
interfaces / other	
number of electrical connections	
● for operator console	1
● for signaling contact	1
● for power supply	2
type of electrical connection	
● for operator console	5-pole M12 socket (A-coded)
● for signaling contact	5-pole M12 plug (B-coded)
● for power supply	4-pole M12 plug (L-coded)
design of the removable storage	
● C-PLUG	Yes
product function / device replacement with replacement of the storage medium	Yes
operating voltage / of the signaling contacts	
● at DC / rated value	54 V
operational current / of the signaling contacts	
● at DC / maximum	0.1 A
supply voltage, current consumption, power loss	
product component / connection for redundant voltage supply	Yes
supplied active power / of PSE / with PoE	
● per port / maximum	60 W
● total / maximum	240 W; 190W at 70°C
type of voltage / 1 / of the supply voltage	DC
● supply voltage / 1 / rated value	54 V; XP-200EEC with EN 50155 supports the voltage range 52 ... 57 V DC
● power loss [W] / 1 / rated value	25 W

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● consumed current / 1 / at rated supply voltage / maximum	5.5 A
● supply voltage / 1 / voltage range	52 ... 57
● consumed current / 1 / maximum	5.5 A
● type of electrical connection / 1 / for power supply	4-pole M12 plug (L-coded)
● product component / 1 / fusing at power supply input	Yes
● fuse protection type / 1 / at input for supply voltage	15 A / 60 V
ambient conditions	
ambient temperature	
● during operation	-40 ... +70 °C
● during storage	-40 ... +85 °C
● during transport	-40 ... +85 °C
● note	EEC variants with EN 50155 support for 10 minutes: -40 °C ... +85 °C
relative humidity	
● at 25 °C / without condensation / during operation / maximum	95 %
protection class IP	IP65
design, dimensions and weights	
design	compact
width	280 mm
height	200 mm
depth	49 mm
net weight	2.5 kg
product feature / conformal coating	Yes
material / of the enclosure	Aluminum
fastening method	module rack mounting, back wall mounting
● wall mounting	Yes
product features, product functions, product components / general	
cascading in the case of a redundant ring / at reconfiguration time of <\~0.3\~s	50
cascading in cases of star topology	any (depending only on signal propagation time)
product function	
● QoS according to DSCP	Yes
product feature	
● Cut Through switching method	No
● Store & Forward switching method	Yes
product functions / management, configuration, engineering	
product function	
● CLI	Yes
● web-based management	Yes
● 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
● with IRT / PROFINET IO switch	No
● PROFINET IO diagnosis	Yes
● switch-managed	Yes
PROFINET conformity class	B
network load class / according to PROFINET	III
telegram length / for Ethernet / maximum	10240 byte
protocol / is supported	
● Telnet	Yes
● HTTP	Yes
● HTTPS	Yes
● TFTP	Yes
● SFTP	Yes

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● BOOTP	Yes
● GMRP	Yes
● DCP	Yes
● LLDP	Yes
● EtherNet/IP	Yes
● SNMP v1	Yes
● SNMP v2	Yes
● SNMP v3	Yes
● IGMP (snooping/querier)	Yes
identification & maintenance function	
● I&M0 - device-specific information	Yes
● I&M1 - higher level designation/location designation	Yes
product functions / diagnostics	
product function	
● port diagnostics	Yes
● statistics Packet Size	Yes
● statistics packet type	Yes
● error statistics	Yes
● SysLog	Yes
product functions / VLAN	
product function	
● VLAN - port based	Yes
● VLAN - protocol-based	No
● VLAN - IP-based	No
number of VLANs / maximum	257
number of VLANs - dynamic / maximum	257
number of VLANs / at ring redundancy (HRP; MRP; standby link)	257
product functions / DHCP	
product function	
● DHCP server	Yes
● DHCP client	Yes
● DHCP Option 82	Yes
● DHCP Option 66	Yes
● DHCP Option 67	Yes
product functions / redundancy	
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
product function	
● media redundancy protocol (MRP) with redundancy manager	Yes
● Media Redundancy Protocol Interconnection (MRP-I)	Yes; LC mode
● of the PROFINET IO device / is supported / H-Sync forwarding	Yes
● of the PROFINET IO device / is supported / PROFINET system redundancy	Yes
● ring redundancy	Yes
● high speed redundancy protocol (HRP) with redundancy manager	Yes
● high speed redundancy protocol (HRP) with standby redundancy	Yes
● redundancy procedure STP	Yes
● redundancy procedure RSTP	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	
● LACP	Yes

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system modification during operation	
product function / configuration in RUN via CiR/H-CiR	Yes
product functions / security	
product function	
● IEEE 802.1x (radius)	Yes
● RADIUS client	Yes
● broadcast/multicast/unicast limiter	Yes
● broadcast blocking	Yes
protocol / is supported	
● SSH	Yes
● SSL	Yes
product functions / time	
product function	
● SICLOCK support	Yes
● NTP-client	Yes
● SNTP client	Yes
protocol / is supported	
● NTP	Yes
● SNTP	Yes
● IEEE 1588 profile default	Yes
standards, specifications, approvals	
certificate of suitability	
● CE marking	Yes
● UKCA marking	Yes
● Regulatory Compliance Mark (RCM)	Yes
standard	
● for EMC interference emission	EN 61000-6-4, EN 50121-4, EN 50121-3-2, EMV06 Class S0
● for immunity to EMC	EN 61000-6-2, EN 50121-4, EN 50121-3-2
standards, specifications, approvals / other	
certificate of suitability	
● railway application in accordance with EN 50155	Yes; OT4, ST1, H1, S2, C1, L4, PC2
● fire protection in accordance with EN 45545-2	Yes; Class HL1 - HL3
● RoHS conformity	Yes
resistance to air pollution / conformity according to ANSI/ISA-71.04	Yes; G3
standards, specifications, approvals / marine classification	
certificate of suitability / shipbuilding approval / note	Certifications marked 'No' are currently under renewal.
Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	No
● French marine classification society (BV)	No
● Chinese Classification Society (CCS)	No
● Det Norske Veritas (DNV)	No
● Korean Register of Shipping (KRS)	No
● Lloyds Register of Shipping (LRS)	No
● Nippon Kaiji Kyokai (NK)	No
● Polski Rejestr Statkow (PRS)	No
● Royal Institution of Naval Architects (RINA)	No
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
● total	586.07 kg
● during manufacturing	66.7 kg
● during operation	519 kg
● after end of life	0.37 kg
product functions / general	
MTBF	17.9 a
reference temperature / for MTBF determination	40 °C
warranty period	5 a
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022

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further information / internet links	
internet link	
● to website: Selection guide for cables and connectors	https://support.industry.siemens.com/cs/ww/en/view/109766358
● to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
● to website: Industrial communication	https://www.siemens.com/simatic-net
● to web page: SiePortal	https://sieportal.siemens.com/
● to website: Image database	https://www.automation.siemens.com/bilddb
● to website: CAx-Download-Manager	https://www.siemens.com/cax
● to website: Industry Online Support	https://support.industry.siemens.com

security information	
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement - and continuously maintain - a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)

Approvals / Certificates	
Environmental Product Declaration	
● global warming potential [CO2 eq] / during manufacturing	66.7 kg
● global warming potential [CO2 eq] / during operation	519 kg
● global warming potential [CO2 eq] / after end of life	0.37 kg
● global warming potential [CO2 eq] / total	586.07 kg

Environment	General Product Approval				
EPD	UL	RCM	UKCA	CE EG-Konf.	China RoHS

Test Certificates	Railway
Type Test Certific-ates/Test Report	Confirmation

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