SIEMENS

Data sheet	**6GK5646-2GS00-2AC2**

product type designation	**SC646-2C**

SCALANCE SC646-2C Industrial Security Appliance; For protection of devices and networks in discrete manufacturing and the process industry for protection of the industrial communication with firewall and VPN; Further functions: address conversion (NAT/NAPT); Connection to SINEMA RC; 4x ports electrical 10/100/1000 Mbit/s RJ45 and 2x combo port electrical or optical; 10/100/1000 Mbit/s RJ45 or 100 Mbit/s SFP or 1000 Mbit/s SFP.

transfer rate	
transfer rate	10 Mbit/s, 100 Mbit/s, 1000 Mbit/s
interfaces	
number of electrical/optical connections / for network components or terminal equipment / maximum	6
number of electrical connections	
● for signaling contact	1
● for power supply	1
● for redundant voltage 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
signal inputs/outputs	
number of electrical connections	
● for digital input signals	1
type of electrical connection	
● for digital input signals	2-pole terminal block
● for digital output signals	2-pole terminal block
operating voltage / of the signaling contacts / at DC / rated value	24 V
operational current / of the signaling contacts / at DC / maximum	0.1 A
supply voltage, current consumption, power loss	
supply voltage / 1 / rated value	24 V; (with plugged-in SFPs)
power loss [W] / 1 / rated value	9.6 W
supply voltage / 1 / rated value	9.6 ... 31.2 V
consumed current	
● 1 / maximum	0.4 A
ambient conditions	
ambient temperature	
● during operation	-40 ... +70 °C
● during storage	-40 ... +85 °C
● during transport	-40 ... +85 °C
relative humidity / at 25 °C / without condensation / during operation / maximum	95 %
protection class IP	IP20
design, dimensions and weights	
design	compact
width	60 mm
height	145 mm

depth	125 mm
net weight	0.58 kg
fastening method	Fixing bolt with additional screw protection
fastening method	
● 35 mm top hat DIN rail mounting	Yes
● S7-300 rail mounting	Yes
● S7-1500 rail mounting	Yes
● wall mounting	Yes
product features, product functions, product components / general	
product function / DynDNS client	Yes
product functions / management, configuration, engineering	
product function	
● CLI	Yes
● web-based management	Yes
● MIB support	Yes
protocol / is supported	
● Telnet	No
● HTTP	No
● HTTPS	Yes
● TFTP	Yes
● FTP	Yes
● SFTP	Yes
● DCP	Yes
● LLDP	Yes
● SNMP v1	Yes
● SNMP v2	Yes
● SNMP v3	Yes
product function	
● RMON	Yes
● port mirroring	Yes
● multiport mirroring	Yes
● CoS	Yes
type of configuration	WBM, CLI, SNMP
PROFINET conformity class	A
product functions / diagnostics	
product function	
● SysLog	Yes
● packet filter log	Yes
● audit log	Yes
● system log	Yes
● port diagnostics	Yes
● statistics Packet Size	Yes
● statistics packet type	Yes
● error statistics	Yes
product functions / DHCP	
product function	
● DHCP client	Yes
● DHCP server - internal network	Yes
● DHCP Option 66	Yes
● DHCP Option 67	Yes
product functions / routing	
product function / static IP routing	Yes
protocol / is supported / VRRP	Yes
product function / static IP routing IPv6	Yes
protocol / is supported / OSPFv2	Yes
product functions / security	
firewall version	stateful inspection
type of encryption algorithms / with VPN connection	AES-256, AES-192, AES-128, 3DES-168, DES-56
type of authentication procedure / with VPN connection	Preshared key (PSK), X.509v3 certificates
type of hashing algorithms / with VPN connection	MD5, SHA-1, SHA-256, SHA-384, SHA-512

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number of possible connections / with VPN connection	200
product function	
● password protection	Yes
● bandwidth limitation	No
● NAT/NAPT	Yes
● IEEE 802.1x (radius)	Yes
● broadcast/multicast/unicast limiter	Yes
● broadcast blocking	Yes
protocol / is supported / SSH	Yes

product functions / redundancy

product function	
● ring redundancy	Yes
● standby redundancy	Yes
● High Speed Redundancy Protocol (HRP)	Yes
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
product function	
● redundancy procedure STP	Yes
● redundancy procedure RSTP	Yes
● passive listening	Yes

product functions / time

protocol / is supported / NTP	Yes
protocol / is supported / SNTP	Yes
product feature / hardware real time clock w. battery backup	Yes

standards, specifications, approvals

standard	
● for emitted interference	EN 61000-6-4: 2007
● for interference immunity	EN 61000-6-2: 2005
certificate of suitability	AS/NZS 2064 (Class A), EN 61000-6-2, EN 61000-6-4
● CE marking	Yes
● C-Tick	Yes
● CCC	Yes
MTBF	31.64 a
● reference temperature	40 °C

standards, specifications, approvals / marine classification

Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	Yes
● French marine classification society (BV)	Yes
● DNV GL	Yes
● Korean Register of Shipping (KRS)	Yes
● Lloyds Register of Shipping (LRS)	Yes
● Nippon Kaiji Kyokai (NK)	Yes
● Polski Rejestr Statkow (PRS)	Yes
● Royal Institution of Naval Architects (RINA)	Yes

standards, specifications, approvals / hazardous environments

standard / for hazardous zone	EN 60079-0: 2006, EN60079-15: 2005, II 3 G Ex nA IIC T4 Gc, KEMA 07ATEX0145 X
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
● as marking	Ex nA IIC T4 Gc

accessories

product extension / optional / C-PLUG	Yes

further information / internet links

internet link	
● to website: Industrial communication	http://www.siemens.com/simatic-net
● to website: Industry Mall	https://mall.industry.siemens.com
● to website: Information and Download Center	http://www.siemens.com/industry/infocenter
● to website: Image database	http://automation.siemens.com/bilddb
● to website: CAx-Download-Manager	http://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 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 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)
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