SIEMENS

Data sheet

6AG1443-1GX30-4XE0



SIPLUS NET CP 443-1 Advanced based on 6GK7443-1GX30-0XE0 with conformal coating, 0...+60 °C, 1x 10/100/1000 Mbps; 4x 10/100 Mbps (IE switch); RJ 45 ports; ISO; TCP; UDP; PROFINET IO controller S7 communication; open communication (send/ receive); S7 routing; IP configuration via DHCP/block; IP access control list; time--of-day synchronization; extended Web diagnostics; fast start up; support for PROFlenergy; IP routing; FTP; web server;

Figure similar

| transfer rate | |
|--|--|
| transfer rate | |
| at the 1st interface | 10 1000 Mbit/s |
| at the 2nd interface | 10 100 Mbit/s |
| interfaces | |
| number of interfaces / according to Industrial Ethernet | 5 |
| number of electrical connections | |
| at the 1st interface / according to Industrial Ethernet | 1 |
| • at the 2nd interface / according to Industrial Ethernet | 4 |
| type of electrical connection | |
| at the 1st interface / according to Industrial Ethernet | RJ45 port |
| at the 2nd interface / according to Industrial Ethernet | RJ45 port |
| design of the removable storage | |
| • C-PLUG | Yes |
| supply voltage, current consumption, power loss | |
| type of voltage / of the supply voltage | DC |
| supply voltage / 1 / from backplane bus | 5 V |
| relative symmetrical tolerance / at DC | |
| • at 5 V | 5 % |
| consumed current | |
| from backplane bus / at DC / at 5 V / typical | 1.8 A |
| power loss [W] | 7.25 W |
| ambient conditions | |
| ambient temperature | |
| during operation | 0 60 °C |
| during storage | -40 +70 °C |
| during transport | -40 +70 °C |
| installation altitude / at height above sea level / maximum | 5000 m |
| ambient condition / relating to ambient temperature - air pressure - installation altitude | Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) |
| relative humidity | |
| • with condensation / according to IEC 60068-2-38 / maximum | 100 %; RH including condensation/frost (no commissioning when condensation is present), horizontal installation |
| chemical resistance / to commercially available cooling lubricants | Yes; incl. airborne diesel and oil droplets |
| resistance to biologically active substances | |
| • conformity according to EN 60721-3-3 | Yes; Class 3B2 mold and fungal spores (excluding fauna), Class 3B3 on request |
| conformity according to EN 60721-3-6 | Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna) |
| resistance to chemically active substances | |

| ● conformity according to EN 60721-3-3 | Yes; Class 3C4 (RH < 75 %) incl. salt spray in accordance with EN 60068-2-52 (Severity 3). The supplied plug covers must remain in place on the unused interfaces during operation. |
|---|---|
| conformity according to EN 60721-3-6 | Yes |
| resistance to mechanically active substances | |
| • conformity according to EN 60721-3-3 | Yes; Class 3S4 incl. sand, dust. The supplied plug covers must remain in place over the unused interfaces during operation. |
| conformity according to EN 60721-3-6 | Yes; Class 6S3 incl. sand, dust. The supplied plug covers must remain in place over the unused interfaces during operation. |
| coating / for equipped printed circuit board / according to EN 61086 | Yes; Class 2 for high availability |
| type of coating / protection against pollution according to EN 60664-3 | Yes; Protection of the type 1 |
| type of test / of the coating / according to MIL-I-46058C | Yes; Coating discoloration during service life possible |
| product conformity / of the coating / Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A | Yes; Conformal coating, class A |
| protection class IP | IP20 |
| design, dimensions and weights | |
| module format | Compact module S7-400 single width |
| width | 25 mm |
| height | 290 mm |
| depth | 210 mm |
| net weight | 0.7 kg |
| product features, product functions, product components / gene | • |
| | oral |
| number of units | |
| • per CPU / maximum | 14 |
| • note | max. 4 as PN IO ctrl. |
| performance data / open communication | |
| number of possible connections / for open communication / by means of SEND/RECEIVE blocks / maximum | 64 |
| data volume | |
| as user data per ISO connection / for open communication / by means of SEND/RECEIVE blocks / maximum | 8 Kibyte |
| as user data per ISO on TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum | 8 Kibyte |
| as user data per TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum | 8 Kibyte |
| as user data per UDP connection / for open IE communication / by means of SEND/RECEIVE blocks / maximum | 2 Kibyte |
| number of possible connections / for open communication | |
| by means of T blocks / maximum | 64 |
| data volume | |
| as user data per ISO on TCP connection / for open communication / by means of T blocks / maximum | 1452 byte |
| performance data / S7 communication | |
| number of possible connections / for S7 communication | |
| • maximum | 128; when using several CPUs |
| with PG connections / maximum | 2 |
| performance data / multi-protocol mode | |
| number of active connections / with multi-protocol mode | 128 |
| performance data / IT functions | |
| number of possible connections | |
| as client / by means of FTP / maximum | 20 |
| • | 10 |
| as server / by means of FTP / maximum number of possible connections. | 10 |
| number of possible connections | |
| as server / by means of HTTP / maximum | 4 |
| as email client / maximum | 1 |
| data volume / as user data for email / maximum storage capacity / of the user memory | 8 Kibyte |
| as flash memory file system | 30 Mibyte |
| • as RAM | 16 Mibyte |
| ✓ US I VAIVI | 10 Wildytt |

| additionally buffered as RAM via central backup battery | 512 Kibyte |
|--|----------------------|
| number of possible write cycles / of the flash memory cells | 100000 |
| performance data / PROFINET communication / as PN IO contro | ller |
| product function / PROFINET IO controller | Yes |
| number of PN IO devices / on PROFINET IO controller / operable / total | 128 |
| number of PN IO IRT devices / on PROFINET IO controller / operable | 64 |
| number of external PN IO lines / with PROFINET / per rack | 4 |
| data volume | |
| as user data for input variables / as PROFINET IO controller / maximum | 8 Kibyte |
| as user data for output variables / as PROFINET IO controller / maximum | 8 Kibyte |
| as user data for input variables per PN IO device / as PROFINET IO controller / maximum | 1433 byte |
| as user data for output variables per PN IO device / as PROFINET IO controller / maximum | 1433 byte |
| as user data for input variables per PN IO device / for each sub-module as PROFINET IO controller / maximum | 240 byte |
| as user data for output variables per PN IO device / for each sub-module as PROFINET IO controller / maximum | 240 byte |
| performance data / PROFINET CBA | |
| number of remote connection partners / with PROFINET CBA | 64 |
| number of connections / with PROFINET CBA / total | 600 |
| data volume ■ as user data for digital inputs / with PROFINET CBA / maximum | 8 Kibyte |
| as user data for digital outputs / with PROFINET CBA / maximum | 8 Kibyte |
| as user data for arrays and data types / in the case of acyclic transmission / with PROFINET CBA / maximum | 8 Kibyte |
| as user data for arrays and data types / with PROFINET CBA / with cyclical transfer / maximum | 250 byte |
| as user data for arrays and data types / with PROFINET CBA / in the case of local interconnection / maximum | 2400 byte |
| performance data / PROFINET CBA / remote interconnection / w | ith acyclic transfer |
| update time / of the remote interconnections / in the case of acyclic transmission / with PROFINET CBA | 100 ms |
| number of remote connections to input variables / in the case of acyclic transmission / with PROFINET CBA / maximum | 150 |
| number of remote connections to output variables / in the case of acyclic transmission / with PROFINET CBA / maximum | 150 |
| data volume | |
| as user data for remote interconnections with input variables / in the case of acyclic transmission / with PROFINET CBA | 8 Kibyte |
| as user data for remote interconnections with output variables / in the case of acyclic transmission / with PROFINET CBA | 8 Kibyte |
| performance data / PROFINET CBA / remote interconnection / w | ith cyclic transfer |
| update time / of the remote interconnections / with cyclical transfer / with PROFINET CBA | 10 ms |
| number of remote connections to input variables / with PROFINET CBA / with cyclic transfer / maximum | 250 |
| number of remote connections to output variables / with cyclical transfer / with PROFINET CBA / maximum | 250 |
| data volume | |
| as user data for remote interconnections with input variables / with cyclical transfer / with PROFINET CBA / maximum | 2000 byte |
| as user data for remote interconnections with output variables / with cyclical transfer / with PROFINET CBA / maximum | 2000 byte |
| performance data / PROFINET CBA / HMI variables via PROFINE | T / acyclic |
| number of connectable HMI stations / for HMI variables / in the case of acyclic transmission / with PROFINET CBA | 3 |
| update time / of the HMI variables / in the case of acyclic transmission / with PROFINET CBA | 500 ms |

| number of HMI variables / in the case of acyclic transmission / with PROFINET CBA / maximum | 200 | |
|--|---|--|
| data volume / as user data for HMI variables / in the case of acyclic transmission / with PROFINET CBA / maximum | 8 Kibyte | |
| performance data / PROFINET CBA / device-internal interconnec | ctions | |
| number of internal connections / with PROFINET CBA / maximum | 300 | |
| data volume / of the internal connections / with PROFINET CBA / maximum | 2400 byte | |
| performance data / PROFINET CBA / interconnections to constants | | |
| number of connections with constants / with PROFINET CBA / maximum | 500 | |
| data volume / as user data for interconnections with constants / with PROFINET CBA / maximum | 4000 byte | |
| performance data / PROFINET CBA / PROFIBUS proxy functional | ality | |
| product function / with PROFINET CBA / PROFIBUS proxy functionality | No | |
| performance data / telecontrol | | |
| protocol / is supported | | |
| • TCP/IP | Yes | |
| product functions / management, configuration, engineering | | |
| product function / MIB support | Yes | |
| protocol / is supported | | |
| • SNMP v1 | Yes | |
| • DCP | Yes | |
| • LLDP | Yes | |
| configuration software | | |
| • required | STEP 7 V5.5 SP3 or higher / STEP 7 Professional V12 (TIA Portal) or higher | |
| for PROFINET CBA / required | SIMATIC iMap V3.0 SP1 and higher | |
| product functions / diagnostics | | |
| product function / web-based diagnostics | Yes | |
| product functions / switch | | |
| | | |
| product feature / switch | Yes | |
| product feature / switch | Yes | |
| product function | Yes | |
| · | | |
| product function • switch-managed | No | |
| product function • switch-managed • with IRT / PROFINET IO switch | No Yes | |
| product function | No Yes | |
| product function | No Yes Yes | |
| product function | No Yes | |
| product function | No Yes Yes | |
| product function | No Yes Yes Yes | |
| product function | No Yes Yes Yes Yes Yes Yes | |
| product function | No Yes Yes Yes | |
| product function | No Yes Yes Yes Yes Yes Yes Yes Yes Yes | |
| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection | No Yes Yes Yes Yes Yes Yes Yes Yes AES-256, AES-192, AES-128, 3DES-168, DES-56 | |
| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection type of authentication procedure / with VPN connection | No Yes Yes Yes Yes Yes Yes Yes Yes Yes | |
| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection type of authentication procedure / with VPN connection type of hashing algorithms / with VPN connection | Yes Yes Yes Yes Yes Yes Yes Yes AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates | |
| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection type of authentication procedure / with VPN connection | Yes Yes Yes Yes Yes Yes Yes Yes Yes AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates MD5, SHA-1 | |
| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection type of authentication procedure / with VPN connection type of hashing algorithms / with VPN connection number of possible connections / with VPN connection product function | Yes Yes Yes Yes Yes Yes Yes Yes Yes AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates MD5, SHA-1 | |
| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection type of authentication procedure / with VPN connection type of hashing algorithms / with VPN connection number of possible connections / with VPN connection | Yes Yes Yes Yes Yes Yes Yes Stateful inspection IPSec AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates MD5, SHA-1 32 | |
| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection type of authentication procedure / with VPN connection type of hashing algorithms / with VPN connection number of possible connections / with VPN connection product function • password protection for Web applications • ACL - IP-based | No Yes Yes Yes Yes Yes Yes Stateful inspection IPSec AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates MD5, SHA-1 32 Yes | |
| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection type of authentication procedure / with VPN connection type of hashing algorithms / with VPN connection number of possible connections / with VPN connection product function • password protection for Web applications | Yes Yes Yes Yes Yes Yes Yes Stateful inspection IPSec AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates MD5, SHA-1 32 Yes Yes | |
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| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection type of authentication procedure / with VPN connection type of hashing algorithms / with VPN connection number of possible connections / with VPN connection product function • password protection for Web applications • ACL - IP-based • ACL - IP-based for PLC/routing • switch-off of non-required services • blocking of communication via physical ports | No Yes Yes Yes Yes Yes Stateful inspection IPSec AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates MD5, SHA-1 32 Yes Yes Yes Yes Yes | |
| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection type of authentication procedure / with VPN connection type of hashing algorithms / with VPN connection number of possible connections / with VPN connection product function • password protection for Web applications • ACL - IP-based • ACL - IP-based for PLC/routing • switch-off of non-required services • blocking of communication via physical ports • log file for unauthorized access | No Yes Yes Yes Yes Yes Stateful inspection IPSec AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates MD5, SHA-1 32 Yes Yes Yes Yes Yes Yes | |
| product function | No Yes Yes Yes Yes Yes Stateful inspection IPSec AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates MD5, SHA-1 32 Yes Yes Yes Yes Yes Yes Yes No | |
| product function | No Yes Yes Yes Yes Yes stateful inspection IPSec AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates MD5, SHA-1 32 Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye | |
| product function • switch-managed • with IRT / PROFINET IO switch • configuration with STEP 7 product functions / redundancy product function • ring redundancy • redundancy manager protocol / is supported / Media Redundancy Protocol (MRP) product functions / security firewall version product function / with VPN connection type of encryption algorithms / with VPN connection type of authentication procedure / with VPN connection type of hashing algorithms / with VPN connection number of possible connections / with VPN connection product function • password protection for Web applications • ACL - IP-based • ACL - IP-based for PLC/routing • switch-off of non-required services • blocking of communication via physical ports • log file for unauthorized access product functions / time product function / SICLOCK support product function / pass on time synchronization | No Yes Yes Yes Yes Yes Stateful inspection IPSec AES-256, AES-192, AES-128, 3DES-168, DES-56 Preshared key (PSK), X.509v3 certificates MD5, SHA-1 32 Yes Yes Yes Yes Yes Yes Yes No | |
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reference code

• according to IEC 81346-2:2019

KEC

further information / internet links

internet link

• to website: Selection guide for cables and connectors

• to web page: selection aid TIA Selection Tool

• to website: Industrial communication

• to web page: SiePortal

• to website: Image database

• to website: CAx-Download-Manager

• to website: Industry Online Support

https://support.industry.siemens.com/cs/ww/en/view/109766358

https://www.siemens.com/tstcloud

https://www.siemens.com/simatic-net

https://sieportal.siemens.com/

https://www.automation.siemens.com/bilddb

https://siemens.com/cax

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

General Product Approval

FMV

Miscellaneous



Manufacturer Declaration



<u>KC</u>



For use in hazardous locations

CCC-Ex





IECEx

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