

Product type designation

SIPLUS NET CP 443-1 ADVANCED

SIPLUS NET CP 443-1 Advanced for medial exposure with conformal coating based on "6GK7443-1GX30-0XE0 . ""1x" "10/100/1000 Mbit/s;"" ""4x 10/100" "Mbit/s (IE switch);"" ""RJ45" "ports;"" ""ISO; TCP; UDP;" "PROFINET IO CON ""TROLLER; S7" "communication;"" open" communication (SEND/RE- "CEIVE); S7 routing; IP" configu- ration via "DHCP/block;""via ""IP Access" "Control List; Clock-"" ""Time" "synchronization; extended ""Web" "diagnostics; fast start up;"" "PROFenergy support; ""IP" "routing; FTP; Web server;"" E-mail PROFINET C(*)



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 / acc. to Industrial Ethernet

5

Number of electrical connections

- | | |
|--|---|
| • at the 1st interface / acc. to Industrial Ethernet | 1 |
| • at the 2nd interface / acc. to Industrial Ethernet | 4 |

Type of electrical connection

- | | |
|--|-----------|
| • at the 1st interface / acc. to Industrial Ethernet | RJ45 port |
| • at the 2nd interface / acc. 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 | |
| <ul style="list-style-type: none"> • at 5 V | 5 % |
| Consumed current | |
| <ul style="list-style-type: none"> • from backplane bus / at DC / at 5 V / typical | 1.8 A |
| Power loss [W] | 7.25 W |
| Ambient conditions | |
| Ambient temperature | |
| <ul style="list-style-type: none"> • during operation • during storage • during transport | 0 ... 60 °C -40 ... +70 °C -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 | |
| <ul style="list-style-type: none"> • with condensation / acc. 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 | |
| <ul style="list-style-type: none"> • conformity acc. to EN 60721-3-3 • conformity acc. to EN 60721-3-6 | Yes; Class 3B2 mold and fungal spores (excluding fauna), Class 3B3 on request Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna) |
| Resistance to chemically active substances | |
| <ul style="list-style-type: none"> • conformity acc. to EN 60721-3-3 • conformity acc. to EN 60721-3-6 | 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. Yes |
| Resistance to mechanically active substances | |
| <ul style="list-style-type: none"> • conformity acc. to EN 60721-3-3 • conformity acc. to EN 60721-3-6 | Yes; Class 3S4 incl. sand, dust. The supplied plug covers must remain in place over the unused interfaces during operation. 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 / acc. 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 / acc. 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 acc. 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 / general | |
|---|-----------------------|
| Number of units | |
| <ul style="list-style-type: none"> per CPU / maximum | 14 |
| <ul style="list-style-type: none"> 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 |
| Amount of data | |
| <ul style="list-style-type: none"> as user data per ISO connection / for open communication / by means of SEND/RECEIVE blocks / maximum | 8 Kibyte |
| <ul style="list-style-type: none"> as user data per ISO on TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum | 8 Kibyte |
| <ul style="list-style-type: none"> as user data per TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum | 8 Kibyte |
| <ul style="list-style-type: none"> 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 | |
| <ul style="list-style-type: none"> by means of T blocks / maximum | 64 |
| Amount of data | |
| <ul style="list-style-type: none"> 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 | |
| <ul style="list-style-type: none"> maximum | 128; when using several CPUs |
| <ul style="list-style-type: none"> 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 | |
| <ul style="list-style-type: none"> • as client / by means of FTP / maximum | 20 |
| <ul style="list-style-type: none"> • as server / by means of FTP / maximum | 10 |
| Number of possible connections | |
| <ul style="list-style-type: none"> • as server / by means of HTTP / maximum | 4 |
| <ul style="list-style-type: none"> • as e-mail client / maximum | 1 |
| Amount of data / as user data for email / maximum | 8 Kibyte |
| Storage capacity / of the user memory | |
| <ul style="list-style-type: none"> • as flash memory file system | 30 Mibyte |
| <ul style="list-style-type: none"> • as RAM | 16 Mibyte |
| <ul style="list-style-type: none"> • 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 controller

| | |
|--|-----------|
| Product function / PROFINET IO controller | Yes |
| Number of PN IO devices / on PROFINET IO controller / usable / total | 128 |
| Number of PN IO IRT devices / on PROFINET IO controller / usable | 64 |
| Number of external PN IO lines / with PROFINET / per rack | 4 |
| Amount of data | |
| <ul style="list-style-type: none"> • as user data for input variables / as PROFINET IO controller / maximum | 8 Kibyte |
| <ul style="list-style-type: none"> • as user data for input variables / as PROFINET IO controller / maximum | 8 Kibyte |
| <ul style="list-style-type: none"> • as user data for input variables per PN IO device / as PROFINET IO controller / maximum | 1433 byte |
| <ul style="list-style-type: none"> • as user data for output variables per PN IO device / as PROFINET IO controller / maximum | 1433 byte |
| <ul style="list-style-type: none"> • as user data for input variables per PN IO device / for each sub-module as PROFINET IO controller / maximum | 240 byte |
| <ul style="list-style-type: none"> • 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 |
| Amount of data | |
| <ul style="list-style-type: none"> • as user data for digital inputs / with PROFINET CBA / maximum | 8 Kibyte |

| | |
|---|-----------|
| <ul style="list-style-type: none"> • as user data for digital outputs / with PROFINET CBA / maximum | 8 Kibyte |
| <ul style="list-style-type: none"> • as user data for arrays and data types / in the case of acyclic transmission / with PROFINET CBA / maximum | 8 Kibyte |
| <ul style="list-style-type: none"> • as user data for arrays and data types / with PROFINET CBA / with cyclical transfer / maximum | 250 byte |
| <ul style="list-style-type: none"> • 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 / with acyclic transfer

| | |
|--|----------|
| Refresh 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 |
| Amount of data | |
| <ul style="list-style-type: none"> • as user data for remote interconnections with input variables / in the case of acyclic transmission / with PROFINET CBA | 8 Kibyte |
| <ul style="list-style-type: none"> • 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 / with cyclic transfer

| | |
|---|-----------|
| Refresh time / of the remote interconnections / with PROFINET CBA / with cyclical transfer | 10 ms |
| Number of remote connections to input variables / with PROFINET CBA / with cyclical transfer / maximum | 250 |
| Number of remote connections to output variables / with PROFINET CBA / with cyclical transfer / maximum | 250 |
| Amount of data | |
| <ul style="list-style-type: none"> • as user data for remote interconnections with input variables / with PROFINET CBA / with cyclical transfer / maximum | 2000 byte |
| <ul style="list-style-type: none"> • as user data for remote interconnections with output variables / with PROFINET CBA / with cyclical transfer / maximum | 2000 byte |

Performance data / PROFINET CBA / HMI variables via PROFINET / acyclic

| | |
|---|----------|
| Number of connectable HMI stations / for HMI variables / in the case of acyclic transmission / with PROFINET CBA | 3 |
| Refresh 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 |
| Amount of data / as user data for HMI variables / in the case of acyclic transmission / with PROFINET CBA / maximum | 8 Kibyte |

Performance data / PROFINET CBA / device-internal interconnections

| | |
|--|-----------|
| Number of internal connections / with PROFINET CBA / maximum | 300 |
| Amount of data / 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 |
| Amount of data / as user data for interconnections with constants / with PROFINET CBA / maximum | 4000 byte |

Performance data / PROFINET CBA / PROFIBUS proxy functionality

| | |
|---|----|
| 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 function | |
| • switch-managed | No |

- with IRT / PROFINET IO switch
- Configuration with STEP 7

Yes
Yes

Product functions / redundancy

| | |
|---|-----|
| Product function | |
| • Ring redundancy | Yes |
| • Redundancy manager | Yes |
| Protocol / is supported / Media Redundancy Protocol (MRP) | Yes |

Product functions / Security

| | |
|--|---|
| Firewall version | stateful inspection |
| Product function / with VPN connection | IPSec |
| 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 |
| Number of possible connections / with VPN connection | 32 |
| Product function | |
| • password protection for Web applications | Yes |
| • ACL - IP-based | Yes |
| • ACL - IP-based for PLC/routing | Yes |
| • switch-off of non-required services | Yes |
| • Blocking of communication via physical ports | Yes |
| • log file for unauthorized access | No |

Product functions / time

| | |
|---|-----|
| Product function / SICLOCK support | Yes |
| Product function / pass on time synchronization | Yes |
| Protocol / is supported | |
| • NTP | Yes |

Further information / Internet-Links

| | |
|---|---|
| Internet-Link | |
| • to website: Selector SIMATIC NET SELECTION TOOL | http://www.siemens.com/snst |
| • to website: Industrial communication | http://www.siemens.com/simatic-net |
| • to website: Industry Mall | http://www.siemens.com/industrial-controls/mall |
| • to website: Information and Download Center | http://www.siemens.com/automation/net/catalog |
| • to website: Image database | http://automation.siemens.com/bilddb |
| • to website: CAx Download Manager | http://www.siemens.com/cax |
| • to website: Industry Online Support | http://support.automation.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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