SIEMENS

Data sheet

6AG2243-1BX30-1XE0

product type designation



SIPLUS S7-1200 CP 1243-1 RAIL

SIPLUS S7-1200 CP 1243-1 rail based on 6GK7243-1BX30-0XE0 with conformal coating, -25...+70 °C, OT1 with ST1/2 (+70 °C für 10 minutes), communications processor CP 1243-1 for connection of SIMATIC S7-1200 as additional Ethernet interface and for connection to control centers via telecontrol protocols (DNP3, IEC 60870, TeleControl Basic), security (firewall, VPN)

Figure similar

transfer rate		
transfer rate		
at the 1st interface	10 100 Mbit/s	
interfaces		
number of interfaces / according to Industrial Ethernet	1	
number of electrical connections		
 at the 1st interface / according to Industrial Ethernet 	1	
• for power supply	0	
type of electrical connection		
 at the 1st interface / according to Industrial Ethernet 	RJ45 port	
supply voltage, current consumption, power loss		
type of voltage / of the supply voltage	DC	
supply voltage / 1 / from backplane bus	5 V	
consumed current		
from backplane bus / at DC / at 5 V / typical	0.25 A	
power loss [W]	1.25 W	
ambient conditions		
ambient temperature		
 for vertical installation / during operation 	-25 +60 °C	
 for horizontally arranged busbars / during operation 	-25 +70 °C	
during storage	-40 +70 °C	
during transport	-40 +70 °C	
• note	+70 °C for 10 min (OT1, ST1/ST2 according to EN 50155)	
installation altitude / at height above sea level / maximum	2000 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)	
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 60721-3-5	Yes; Class 5B2 mold and fungal spores (excluding fauna), Class 5B3 on request	
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 60721-3-5	Yes; Class 5C3 (RH < 75%) including salt spray acc. to EN 60068-2-52 (Severity level 3). The supplied plug covers must remain in place over the unused interfaces during operation!
resistance to mechanically active substances	, i
• 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 60721-3-5	Yes; Class 5S3 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 coating / for electronic devices in railway applications according to EN 50155	Yes; Protective coating of the Class PC2 according to EN 50155:2017
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	Yes; Conformal coating, class A
Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	165, Comornal Country, State 71
protection class IP	IP20
design, dimensions and weights	
module format	Compact module S7-1200 single width
width	30 mm
height	110 mm
depth	75 mm
net weight	0.122 kg
fastening method	
35 mm top hat DIN rail mounting	Yes
wall mounting	Yes
product features, product functions, product components / gen	**
	erar
number of units	
per CPU / maximum	3
performance data / open communication	
number of possible connections / for open communication	
• by means of T blocks / maximum	like CPU
·	like CPU
• by means of T blocks / maximum	like CPU
• by means of T blocks / maximum performance data / S7 communication	like CPU
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication	
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum	
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions	
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections	like CPU
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum	like CPU
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol	like CPU
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use	like CPU
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station	like CPU 1 No
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation	like CPU 1 No Yes
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center	like CPU 1 No Yes No
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection	like CPU 1 No Yes No For use with TeleControl Server Basic, WinCC and PCS7
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection	Iike CPU 1 No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note	Iike CPU 1 No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported	like CPU No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported DNP3 IEC 60870-5	like CPU No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols Yes
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported DNP3 IEC 60870-5 product function / data buffering if connection is aborted	like CPU No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols Yes Yes
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported DNP3 IEC 60870-5	like CPU No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols Yes Yes Yes; 64,000 events
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported DNP3 IEC 60870-5 product function / data buffering if connection is aborted number of data points per station / maximum number of stations / for direct communication / with Telecontrol	like CPU No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols Yes Yes Yes; 64,000 events
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported DNP3 IEC 60870-5 product function / data buffering if connection is aborted number of data points per station / maximum number of stations / for direct communication / with Telecontrol Server Basic	Iike CPU No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols Yes Yes Yes; 64,000 events 200
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported DNP3 IEC 60870-5 product function / data buffering if connection is aborted number of data points per station / maximum number of stations / for direct communication / with Telecontrol Server Basic in send direction / maximum in receive direction / maximum	No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols Yes Yes Yes Yes; 64,000 events 200
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported DNP3 IEC 60870-5 product function / data buffering if connection is aborted number of data points per station / maximum number of stations / for direct communication / with Telecontrol Server Basic in send direction / maximum in receive direction / maximum in receive direction / maximum performance data / teleservice	like CPU No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols Yes Yes Yes; 64,000 events 200 3 15
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported DNP3 IEC 60870-5 product function / data buffering if connection is aborted number of data points per station / maximum number of stations / for direct communication / with Telecontrol Server Basic in send direction / maximum in receive direction / maximum performance data / teleservice diagnostics function / online diagnostics with SIMATIC STEP 7	Ilike CPU No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols Yes Yes Yes; 64,000 events 200
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported DNP3 IEC 60870-5 product function / data buffering if connection is aborted number of data points per station / maximum number of stations / for direct communication / with Telecontrol Server Basic in send direction / maximum in receive direction / maximum performance data / teleservice diagnostics function / online diagnostics with SIMATIC STEP 7 product function	No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols Yes Yes Yes; 64,000 events 200 3 15
by means of T blocks / maximum performance data / S7 communication number of possible connections / for S7 communication maximum performance data / IT functions number of possible connections as email client / maximum performance data / telecontrol suitability for use node station substation TIM control center control center connection by means of a permanent connection note protocol / is supported DNP3 IEC 60870-5 product function / data buffering if connection is aborted number of data points per station / maximum number of stations / for direct communication / with Telecontrol Server Basic in send direction / maximum in receive direction / maximum performance data / teleservice diagnostics function / online diagnostics with SIMATIC STEP 7	like CPU No Yes No For use with TeleControl Server Basic, WinCC and PCS7 supported Connection to SCADA system via Telecontrol Server Basic and Standard Telecontrol protocols Yes Yes Yes; 64,000 events 200 3 15

product functions / management, configuration, engineering	
configuration software	
• required	STEP 7 Basic/Professional
roduct functions / diagnostics	
product function / web-based diagnostics	Yes
roduct functions / security	
firewall version	stateful inspection
product function / with VPN connection	IPsec, SINEMA RC
type of encryption algorithms / with VPN connection	AES-256, AES-192, AES-128, 3DES-168
type of authentication procedure / with VPN connection	Preshared key (PSK), X.509v3 certificates
type of hashing algorithms / with VPN connection	MD5, SHA-1, SHA-2
number of possible connections / with VPN connection	8
product function	Na
password protection for Web applications password protection for telepopular appears	No No
password protection for teleservice access appropriate data transmission.	No Yes
encrypted data transmissionACL - IP-based	
	No No
ACL - IP-based for PLC/routing switch-off of non-required services	Yes
 switch-off of non-required services blocking of communication via physical ports 	No
log file for unauthorized access	No
roduct functions / time	140
protocol / is supported	
NTP	Yes
NTP (secure)	Yes
time synchronization	
• from NTP-server	Yes
from control center	Yes
roduct functions / position detection	
certificate of suitability / railway application in accordance with	Yes; EMC for railway vehicles
EN 50121-3-2 certificate of suitability / railway application in accordance with	Yes; EMC for signal and telecommunication equipment
EN 50121-4 certificate of suitability / railway application in accordance with	Yes; Railway applications - Overvoltage category OV2 pollution degree PD2
EN 50124-1	rated impulse voltage UNi = 0.5 kVUNm = DC 24
certificate of suitability / railway application in accordance with EN 50125-1	Yes; Railway vehicles - See ambient conditions
certificate of suitability / railway application in accordance with EN 50125-2	Yes; Fixed-electrical installations - see ambient conditions
certificate of suitability / railway application in accordance with EN 50125-3	Yes; Signal and telecommunications equipment - see Ambient conditions vibrations and shocks: Application point outside the rails (distance 1 m to 3 m from rail)
certificate of suitability / railway application in accordance with EN 50155	Yes; Railway vehicles - temperature class OT1, ST1/ST2, horizontal mounting position
certificate of suitability / railway application in accordance with EN 61373	Yes; Railway vehicles - Vibrations and shocks Category 1 Class A/B
certificate of suitability / fire protection in accordance with EN 45545-2	Yes; Railway vehicles - for proof, see Service & Support
andards, specifications, approvals	
reference code	
• according to IEC 81346-2:2019	KEC
urther information / internet links	
internet link	
• 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
ecurity information	
security information	Siemens provides products and solutions with industrial cybersecurity function 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)

General Product Approval

EMV

Miscellaneous

Manufacturer Declaration









Railway

Confirmation

last modified:

8/22/2024

