

Overview



- For quick, high-performance serial data exchange via point-to-point connection
- Implemented protocols: ASCII, USS drive protocol, Modbus RTU
- Additional protocols can also be loaded
- Simple parameterization with STEP 7 Basic

Technical specifications

	6ES7 241-1CH31-0XB0 CM 1241 RS422/485	6ES7 241-1AH30-0XB0 CM 1241 RS232
Supply voltage		
24 V DC	Yes	
permissible range, lower limit (DC)	20.4 V	
permissible range, upper limit (DC)	28.8 V	
Input current		
Current consumption, max.	240 mA; From L5+; logic	220 mA; From L5+; logic
Power losses		
Power loss, typ.	1.2 W	1.1 W
Interfaces		
Number of interfaces	1	1
Interface physics, RS 232C (V.24)		Yes
Interface physics, RS 422/RS 485 (X.27)	Yes	
Point-to-point		
• Cable length, max.	1 000 m	10 m
• Integrated protocol driver		
- ASCII	Yes; Available as library function	Yes
- USS	Yes; Available as library function	
Climatic and mechanical conditions for storage and transport		
Climatic conditions for storage and transport		
• Free fall		
- Drop height, max. (in packaging)	0.3 m; five times, in dispatch package	0.3 m; five times, in dispatch package
• Temperature		
- Permissible temperature range	-40 °C to +70 °C	-40 °C to +70 °C
• Air pressure acc. to IEC 60068-2-13		
- Permissible air pressure	1080 to 660 hPa	1080 to 660 hPa

SIMATIC S7-1200

Communication

CM 1241 communication modules

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Technical specifications (continued)

	6ES7 241-1CH31-0XB0 CM 1241 RS422/485	6ES7 241-1AH30-0XB0 CM 1241 RS232
Mechanical and climatic conditions during operation Climatic conditions in operation		
• Temperature		
- Permissible temperature range	0 °C to 55 °C horizontal installation 0 °C to 45 °C vertical installation	0 °C to 55 °C horizontal installation 0 °C to 45 °C vertical installation
- Permissible temperature change	5°C to 55°C, 3°C / minute	5°C to 55°C, 3°C / minute
• Air pressure acc. to IEC 60068-2-13		
- Permissible air pressure	1080 to 795 hPa	1080 to 795 hPa
Software Runtime software		
• Target system		
- S7-1200	Yes	Yes
Dimensions Width	30 mm	30 mm
Height	100 mm	100 mm
Depth	75 mm	75 mm
Weight Weight, approx.	155 g	150 g

Ordering data

CM 1241 communication module

Communication module for point-to-point connection, with one RS422/485 interface

Communication module for point-to-point connection, with one RS232 interface

Order No.

6ES7 241-1CH31-0XB0

6ES7 241-1AH30-0XB0

Order No.

Accessories

Front flap set (spare part)

for communication modules

6ES7 291-1CC30-0XA0

S7-1200 automation system, System Manual

for SIMATIC S7-1200 and STEP 7 Basic

German

6ES7 298-8FA30-8AH0

English

6ES7 298-8FA30-8BH0

French

6ES7 298-8FA30-8CH0

Spanish

6ES7 298-8FA30-8DH0

Italian

6ES7 298-8FA30-8EH0

Chinese

6ES7 298-8FA30-8KH0

S7-1200 automation system, Easy Book

Brief instructions

German

6ES7 298-8FA30-8AQ0

English

6ES7 298-8FA30-8BQ0

French

6ES7 298-8FA30-8CQ0

Spanish

6ES7 298-8FA30-8DQ0

Italian

6ES7 298-8FA30-8EQ0

Chinese

6ES7 298-8FA30-8KQ0

Overview

- For fast, high-performance serial data exchange via point-to-point connection
- Implemented protocols: ASCII, USS drive protocol, Modbus RTU
- Additional protocols can be loaded later
- Simple parameterization with STEP 7 Basic
- Can be plugged directly into the CPU

Technical specifications

6ES7 241-1CH30-1XB0 CB 1241 RS485	
Input current from backplane bus 5 V DC, typ.	50 mA
Power losses Power loss, typ.	1.5 W
Interrupts/diagnostics/ status information Diagnostic messages • Diagnostic functions	Yes
Diagnostics indication LED • For status of the outputs	Yes
Degree and class of protection IP20	Yes
Standards, approvals, certificates CE mark	Yes
C-TICK	Yes
FM approval	Yes
Climatic and mechanical conditions for storage and transport Climatic conditions for storage and transport • Free fall - Drop height, max. (in packaging)	0.3 m; five times, in dispatch package
• Temperature - Permissible temperature range	-40 °C to +70 °C
• Air pressure acc. to IEC 60068-2-13 - Permissible air pressure	1080 to 660 hPa
Mechanical and climatic conditions during operation Climatic conditions in operation • Temperature - Permissible temperature range - Permissible temperature change	0 °C to 55 °C horizontal installation 0 °C to 45 °C vertical installation 5°C to 55°C, 3°C / minute
• Air pressure acc. to IEC 60068-2-13 - Permissible air pressure	1080 to 795 hPa
• Pollutant concentrations - SO ₂ at RH < 60% without condensation	SO ₂ : < 0.5 ppm; H ₂ S: < 0.1 ppm; RH < 60% condensation-free
Mechanics/material Type of housing (front) • Plastic	Yes
Dimensions Width	38 mm
Height	62 mm
Depth	21 mm
Weight Weight, approx.	40 g

Ordering data

Order No.

CB 1241 communication board RS485

for point-to-point connection,
with 1 RS485 interface

6ES7 241-1CH30-1XB0

Accessories

Terminal block (spare part)

for signal board

with 6 screws, gold-plated; 4 pcs.

6ES7 292-1BF30-0XA0

S7-1200 automation system, System Manual

for SIMATIC S7-1200 and
STEP 7 Basic

German

6ES7 298-8FA30-8AH0

English

6ES7 298-8FA30-8BH0

French

6ES7 298-8FA30-8CH0

Spanish

6ES7 298-8FA30-8DH0

Italian

6ES7 298-8FA30-8EH0

Chinese

6ES7 298-8FA30-8KH0

S7-1200 automation system, Easy Book

Brief instructions

German

6ES7 298-8FA30-8AQ0

English

6ES7 298-8FA30-8BQ0

French

6ES7 298-8FA30-8CQ0

Spanish

6ES7 298-8FA30-8DQ0

Italian

6ES7 298-8FA30-8EQ0

Chinese

6ES7 298-8FA30-8KQ0

SIMATIC S7-1200

Communication

CM 1242-5

Overview

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DP-M	DP-S	FMS	PG/OP	S7
	●			

The CM 1242-5 communication module is used to connect a SIMATIC S7-1200 to PROFIBUS as a DP slave and has the following characteristics:

- PROFIBUS DPV1 slave in accordance with IEC 61158
- Module replacement without PG supported
- Power is supplied via the backplane bus so that no extra cabling is required
- Support of all standard baud rates from 9.6 Kbit/s to 12 Mbit/s
- Compact industry-standard enclosure in S7-1200 design for mounting on a standard mounting rail
- Fast commissioning thanks to easy configuration using STEP 7 without additional programming overhead

The CM 1242-5 is intended for use in factory automation. Low-cost PROFIBUS-based automation solutions can be created on the basis of the S7-1200 for optimal production.

Technical specifications

Order No.	6GK7 242-5DX30-0XE0
Product-type designation	CM 1242-5
Transmission rate	
Transmission rate at interface 1 in accordance with PROFIBUS	9.6 kbit/s ... 12 Mbit/s
Interfaces	
Number of electrical connections	
• at interface 1 in accordance with PROFIBUS	1
• for power supply	0
Design of electrical connection	
• at interface 1 in accordance with PROFIBUS	9-pin Sub-D socket (RS485)
• for power supply	-
Supply voltage, current consumption, power loss	
Type of voltage of supply voltage	DC
Supply voltage	
• 1 from backplane bus	5 V
• external	-
Relative positive tolerance at 24 V with DC	-
Relative negative tolerance at 24 V with DC	-
Consumed current	
• from backplane bus at 5 V for DC Typical	0.15 A
• from external supply voltage at 24 V with DC	
- typical	-
- maximum	-
Resistive loss	0.75 W

Order No.	6GK7 242-5DX30-0XE0
Product-type designation	CM 1242-5
Permitted ambient conditions	
Ambient temperature	
• for vertical installation during operating phase	0 ... 45 °C
• for horizontal installation during operating phase	0 ... 55 °C
• during storage	-40 ... +70 °C
• during transport	-40 ... +70 °C
• Comment	-
Relative humidity at 25 °C without condensation during operating maximum	95 %
Protection class IP	IP20
Design, dimensions and weight	
Module format	
Width	30 mm
Height	100 mm
Depth	75 mm
Net weight	0.115 kg
Product properties, functions, components general	
Number of units per CPU maximum	3
Number of modules note	-

Technical specifications (continued)

Order No.	6GK7 242-5DX30-0XE0
Product-type designation	CM 1242-5
Performance data	
<u>Performance data open communication</u>	
Number of possible connections for open communication by means of SEND/RECEIVE blocks maximum	-
Data volume as user data per connection for open communication by means of SEND/RECEIVE blocks maximum	-
<u>Performance data PROFIBUS DP</u>	
Service as DP master DPV1	-
Number of DP slaves on DP master usable	-
Amount of data	
• of the address area of the inputs as DP master overall	-
• of the address area of the outputs as DP master overall	-
• of the address area of the inputs per DP slave	-
• of the address area of the outputs per DP slave	-
• of the address area of the diagnostic data per DP slave	-
Service as DP slave	
• DPV0	Yes
• DPV1	Yes
Amount of data	
• of the address area of the inputs as DP slave overall	240 byte
• of the address area of the outputs as DP slave overall	240 byte
<u>Performance data S7 communication</u>	
Number of possible connections for S7 communication	
• maximum	-
• with PG connections maximum	-
• with PG/OP connections maximum	-
• note	-
<u>Performance data multi-protocol mode</u>	
Number of active connections with multi-protocol mode	
• without DP maximum	-
• with DP maximum	-
Product functions management, configuration	
Configuration software required	

Ordering data

Order No.

CM 1242-5 communication module	
Communication module for electrical connection of SIMATIC S7-1200 to PROFIBUS as a DPV1 slave	6GK7 242-5DX30-0XE0
Accessories	
PROFIBUS FastConnect connector RS485	
With 90° cable outlet; insulation displacement technology, max. transmission rate 12 Mbit/s	
• Without PG interface	6ES7 972-0BA52-0XA0
• With PG interface	6ES7 972-0BB52-0XA0
PROFIBUS FC standard cable	
2-core bus cable, shielded, special design for fast mounting, delivery unit: max. 1000 m, minimum order 20 m, sold by the meter	6XV1 830-0EH10
PROFIBUS FastConnect stripping tool	
Stripping tool for fast stripping of the PROFIBUS FastConnect bus cable	6GK1 905-6AA00
PROFIBUS bus terminal 12M	
Bus terminal for connection of PROFIBUS nodes at up to 12 Mbit/s with connecting cable	6GK1 500-0AA10

SIMATIC S7-1200

Communication

CM 1243-2

Overview

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The CM 1243-2 communication module is the AS-Interface master for the SIMATIC S7-1200 and has the following features:

- Connection of up to 62 AS-Interface slaves
- Integrated analog value transmission (Analog Profiles 7.3 and 7.4)
- Supports all AS-Interface master functions according to the AS-Interface Specification V3.0
- Indication of the operating state on the front of the device displayed via LED
- Display of operating mode, AS-Interface voltage faults, configuration faults and peripheral faults via LED behind the front flap
- Compact enclosure in the design of the SIMATIC S7-1200
- Suitable for AS-i power 24V: in combination with the optional DCM 1271 data decoupling module, a standard 24 V power supply unit can be used
- Configuration and diagnostics via the TIA portal

Design

The CM 1243-2 communication module is positioned to the left of the S7-1200 CPU and linked to the S7-1200 via lateral contacts.

It has:

Terminals for two AS-i cables (internally jumpered) via two screw terminals each respectively

- One terminal for connection to the functional ground
- LEDs for indication of the operating state and fault statuses of the connected slaves
- The screw terminals (included in scope of supply) can be removed to facilitate installation.

Function

The CM 1243-2 supports all specified functions of the AS-Interface Specification V3.0.

The values of the digital AS-i slaves can be activated via the process image of the S7-1200. During configuration of the slaves in the TIA Portal, the values of the analog AS-i slaves can also be reached via process image transfer.

It is also possible to exchange all data of the AS-i master and the connected AS-i slaves with the S7-1200 via the data record interface.

Changeover of the operating mode, automatic application of the slave configuration and the re-addressing of a connected AS-i slave can be implemented via the control panel of the CM 1243-2 in the TIA portal.

The optional DCM 1271 data decoupling module has an integrated recognition unit for detecting ground faults on the AS-Interface cable. The integrated overload protection also disconnects the AS-Interface cable if the drive power required exceeds 4 A.

Notes on safety

The use of this product requires suitable protective measures (e. g. network segmentation for IT security among others) in order to ensure safe plant operation, see <http://www.siemens.com/industrialsecurity>.

Configuration

To configure CM 1243-2, you require STEP 7 starting with V11 SP 2 or higher.

Below version STEP 7 V11 you also require the hardware support package for the CM 1243-2, which can be obtained via Siemens Internet Service & Support.

The software enables user-friendly configuration and diagnostics of the AS-i master and any connected slaves.

Alternatively, you can also apply the AS-Interface ACTUAL configuration at the "touch of a button" via the control panel integrated in the TIA portal/STEP7.

Ordering data	Order No.
CM 1243-2 communication module <ul style="list-style-type: none"> • AS-Interface masters for SIMATIC S7-1200 • Corresponds to AS-Interface Specification V3.0 • Dimensions (W x H x D / mm): 30 x 100 x 75 	3RK7 243-2AA30-0XB0
Accessories	
DCM 1271 data decoupling module <ul style="list-style-type: none"> • Optional, for AS-i Power24V when using a standard 24 V power supply • Dimensions (W x H x D / mm): 30 x 100 x 75 	3RK7 271-1AA30-0AA0
5-pole screw terminal for AS-i CM 1243-2 master and AS-i DCM 1271 data decoupling module <ul style="list-style-type: none"> • Screw terminals • As spare part (included in scope of delivery for CM / DCM) 	3RK1 901-3MA00
3-pole screw terminal for AS-i DCM 1271 data decoupling module for connection to power supply <ul style="list-style-type: none"> • Screw terminals • As spare part (included in scope of delivery for CM / DCM) 	3RK1 901-3MB00
Manuals <p>Manual AS-i master CM 1243-2 and AS-i data decoupling module DCM 1271 for SIMATIC S7-1200 Free download on the Internet at http://support.automation.siemens.com/WW/view/en/57358958/0/de</p> <p>German</p> <p>English</p>	3ZX1012-0RK71-1AB1 3ZX1012-0RK71-1AC1

Overview



DP-M	DP-S	FMS	PG/OP	S7
●			●	●

The CM 1243-5 communication module is used to connect a SIMATIC S7-1200 to PROFIBUS as a DP master and has the following characteristics:

- PROFIBUS DPV1 master in accordance with IEC 61158
- Support of up to 16 PROFIBUS DP slaves
- Communication with other S7 controllers based on S7 communication
- Allows the connection of programming devices and operator panels with a PROFIBUS interface to the S7-1200
- Module replacement without PG supported
- Support of all standard baud rates from 9.6 Kbit/s to 12 Mbit/s
- Compact industry-standard enclosure in S7-1200 design for mounting on a standard mounting rail
- Fast commissioning thanks to easy configuration using STEP 7 without additional programming overhead

The CM 1243-5 is intended for use in factory automation. Low-cost PROFIBUS-based automation solutions can be created on the basis of the S7-1200 for optimal production.

Technical specifications

Order No.	6GK7 243-5DX30-0XE0
Product-type designation	CM 1243-5
Transmission rate	
Transmission rate at interface 1 in accordance with PROFIBUS	9.6 kbit/s ... 12 Mbit/s
Interfaces	
Number of electrical connections	
• at interface 1 in accordance with PROFIBUS	1
• for power supply	1
Design of electrical connection	
• at interface 1 in accordance with PROFIBUS	9-pin Sub-D socket (RS485)
• for power supply	
Supply voltage, current consumption, power loss	
Type of voltage of supply voltage	DC
Supply voltage	
• external	24 V
Relative positive tolerance at 24 V with DC	20 %
Relative negative tolerance at 24 V with DC	20 %
Consumed current	
• from external supply voltage at 24 V with DC	
- typical	0.1 A
Resistive loss	2.4 W

Order No.	6GK7 243-5DX30-0XE0
Product-type designation	CM 1243-5
Permitted ambient conditions	
Ambient temperature	
• for vertical installation during operating phase	0 ... 45 °C
• for horizontal installation during operating phase	0 ... 55 °C
• during storage	-40 ... +70 °C
• during transport	-40 ... +70 °C
Relative humidity at 25 °C without condensation during operating maximum	95 %
Protection class IP	IP20
Design, dimensions and weight	
Module format	
Width	30 mm
Height	100 mm
Depth	75 mm
Net weight	0.134 kg
Product properties, functions, components general	
Number of modules	
• per CPU maximum	1

SIMATIC S7-1200

Communication

CM 1243-5

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Technical specifications (continued)

Order No.	6GK7 243-5DX30-0XE0
Product-type designation	CM 1243-5
Performance data	
<u>Performance data PROFIBUS DP</u>	
Service as DP master DPV1	Yes
Number of DP slaves on DP master usable	16
<u>Amount of data</u>	
• of the address area of the inputs as DP master overall	512 byte
• of the address area of the outputs as DP master overall	512 byte
• of the address area of the inputs per DP slave	244 byte
• of the address area of the outputs per DP slave	244 byte
• of the address area of the diagnostic data per DP slave	240 byte
Service as DP slave	
• DPV0	No
• DPV1	No
<u>Performance data S7 communication</u>	
Number of possible connections for S7 communication	
• maximum	8
• with PG connections maximum	1
• with PG/OP connections maximum	3
• note	max. 4 connections to other S7 stations
<u>Performance data multi-protocol mode</u>	
Number of active connections with multi-protocol mode	
• without DP maximum	8
• with DP maximum	8
Product functions management, configuration	
Configuration software required	

Ordering data

Order No.

CM 1243-5 communication module	6GK7 243-5DX30-0XE0
Communication module for electrical connection of SIMATIC S7-1200 to PROFIBUS as a DPV1 master	
Accessories	
PROFIBUS FastConnect connector RS485	
With 90° cable outlet; insulation displacement technology, max. transmission rate 12 Mbit/s	
• Without PG interface	6ES7 972-0BA52-0XA0
• With PG interface	6ES7 972-0BB52-0XA0
PROFIBUS FC standard cable	
2-core bus cable, shielded, special design for fast mounting, delivery unit: max. 1000 m, minimum order 20 m, sold by the meter	6XV1 830-0EH10
PROFIBUS FastConnect stripping tool	
Stripping tool for fast stripping of the PROFIBUS FastConnect bus cable	6GK1 905-6AA00
PROFIBUS bus terminal 12M	
Bus terminal for connection of PROFIBUS nodes at up to 12 Mbit/s with connecting cable	6GK1 500-0AA10

Overview



- Unmanaged switch for connecting a SIMATIC S7-1200 to an Industrial Ethernet network with a line, tree or star topology
- Multiplication of Ethernet interfaces on a SIMATIC S7-1200 for additional connection of up to three programming devices, operator controls, and further Ethernet nodes
- Simple, space-saving mounting on the SIMATIC S7-1200 mounting rail
- Low-cost solution for implementing small, local Ethernet networks
- Connection without any problems using RJ45 standard connectors
- Simple and fast status display via LEDs on the device
- Integral autocrossover function permits use of uncrossed connecting cables

Technical specifications

Order No.	6GK7 277-1AA10-0AA0
Product-type designation	CSM 1277
Transmission rate	
Transfer rate 1	10 Mbit/s
Transfer rate 2	100 Mbit/s
Interfaces	
Number of electrical/optical connections for network components or terminal equipment maximum	4
Number of electrical connections	4
• for network components and terminal equipment	
• for power supply	1
Design of electrical connection	
• for network components and terminal equipment	RJ45 port
• for power supply	3-pole terminal block
Supply voltage, current consumption, power loss	
Type of voltage of supply voltage	DC
Supply voltage external	24 V
• minimum	19.2 V
• maximum	28.8 V
Product component fusing at power supply input	Yes
Type of fusing at input for supply voltage	0,5 A / 60 V
Consumed current maximum	0.07 A
Active power loss at 24 V for DC	1.6 W
Permitted ambient conditions	
Ambient temperature	
• during operating	0 ... 60 °C
• during storage	-40 ... +70 °C
• during transport	-40 ... +70 °C
Relative humidity at 25 °C without condensation during operating maximum	95 %
Protection class IP	IP20

Order No.	6GK7 277-1AA10-0AA0
Product-type designation	CSM 1277
Design, dimensions and weight	
Design	SIMATIC S7-1200 device design
Width	45 mm
Height	100 mm
Depth	75 mm
Net weight	0.15 kg
Type of mounting	
• 35 mm DIN rail mounting	Yes
• wall mounting	Yes
• S7-300 rail mounting	No
Product functions management, configuration	
Product function switch-managed	No
Standards, specifications, approvals	
Standard	
• for EMC from FM	FM3611: Class 1, Division 2, Group A, B, C, D / T..., CL.1, Zone 2, GP. IIC, T.. Ta
• for hazardous zone	EN 60079-15:2005, EN 60079-0:2006, II 3 G Ex nA II T4, KEMA 08 ATEX 0003 X
• for safety of CSA and UL	UL 508, CSA C22.2 No. 142
• for hazardous area of CSA and UL	-
• for emitted interference	EN 61000-6-4 (Class A)
• for interference immunity	EN 61000-6-2
Verification of suitability	EN 61000-6-2, EN 61000-6-4
• CE mark	Yes
• C-Tick	Yes
• KC approval	No

SIMATIC S7-1200

Communication

CSM 1277 unmanaged

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Ordering data

Order No.

**CSM 1277
compact switch module**

Unmanaged switch for connecting a SIMATIC S7-1200 and up to three further nodes to Industrial Ethernet with 10/100 Mbit/s; 4 x RJ45 ports; external 24 V DC power supply, diagnostics on LEDs, S7-1200 module including electronic manual on CD-ROM

6GK7 277-1AA10-0AA0

Order No.

Accessories**IE TP Cord RJ45/RJ45**

TP cable 4 x 2
with 2 RJ45 connectors

- 0.5 m
- 1 m
- 2 m
- 6 m
- 10 m

6XV1 870-3QE50**6XV1 870-3QH10****6XV1 870-3QH20****6XV1 870-3QH60****6XV1 870-3QN10****IE FC Outlet RJ45**

For connecting Industrial Ethernet FC cables and TP cords; graduated prices for 10 and 50 units or more

6GK1 901-1FC00 0AA0

Overview



The CP 1242-7 communications processor is used to connect a SIMATIC S7-1200 to the globally widespread GSM/GPRS mobile radio network and has the following characteristics:

- Worldwide wireless exchange of data between S7-1200 controllers and/or between S7-1200 controllers and control centers with an Internet connection
- Communication based on the GPRS (**G**eneral **P**acket **R**adio **S**ervice) mobile wireless service with data transmission speeds of up to 86 Kbit/s in the downlink and 43 Kbit/s in the uplink
- GPRS mode with fixed IP addresses and dynamic IP addresses with standard mobile phone contract
- Time synchronization on the basis of NTP (**N**etwork **T**ime **P**rotocol)
- On-demand connection buildup via voice call or text message
- Sending and receiving of text messages
- Clearly laid out LED signaling for fast and easy diagnostics
- Compact industrial enclosure in S7-1200 design for mounting on a standard mounting rail
- Fast commissioning thanks to easy configuration using STEP 7

In conjunction with the "Telecontrol Server Basic" software, the CP 1242-7 forms a telecontrol system with further properties:

- Connection of up to 5000 telecontrol stations to the control center via an OPC interface
- Data buffering in the substations in the event of connection failures
- Central status monitoring of the substations
- No special provider services required for fixed IP addresses
- Teleservice access with STEP 7 to the substations via the Internet

Technical specifications

Order No.	6GK7 242-7KX30-0XE0
Product-type designation	CP 1242-7
Transmission rate	
Transfer rate with GPRS transmission	
• with uplink maximum	43 kbit/s
• with downlink maximum	86 kbit/s
Wireless technology	
Type of mobile wireless service	
• is supported	Yes
- SMS	Yes
- GPRS	GPRS (multislot Class 10)
• note	
Type of mobile wireless network is supported	
• GSM	Yes
• UMTS	No
Operating frequency	
• 850 MHz	Yes
• 900 MHz	Yes
• 1800 MHz	Yes
• 1900 MHz	Yes
Transmit power	
• at operating frequency 850 MHz	2 W
• at operating frequency 900 MHz	2 W
• at operating frequency 1800 MHz	1 W
• at operating frequency 1900 MHz	1 W
Interfaces	
Number of electrical connections	
• for external antenna(s)	1
• for power supply	1
Number of slots for SIM cards	1
Design of the electrical connection	
• for external antenna(s)	SMA socket (50 ohms)
• for power supply	
Design of slot for SIM card	Slot under front flap
Supply voltage, current consumption, power loss	
Type of voltage of supply voltage	DC
Supply voltage external	24 V
Relative positive tolerance at 24 V with DC	20 %
Relative negative tolerance at 24 V with DC	20 %
Consumed current from external supply voltage at 24 V with DC	
• typical	0.1 A
• maximum	0.22 A
Resistive loss	2.4 W

SIMATIC S7-1200

Communication

CP 1242-7 GPRS module

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Technical specifications (continued)

Order No.	6GK7 242-7KX30-0XE0
Product-type designation	CP 1242-7
Permitted ambient conditions	
Ambient temperature	
• for vertical installation during operating phase	0 ... 45 °C
• for horizontal installation during operating phase	0 ... 55 °C
• during storage	-40 ... +70 °C
• during transport	-40 ... +70 °C
Relative humidity at 25 °C without condensation during operating maximum	95 %
Protection class IP	IP20
Design, dimensions and weight	
Module format	
Width	30 mm
Height	100 mm
Depth	75 mm
Net weight	0.133 kg
Product properties, functions, components general	
Number of modules	
• per CPU maximum	3
Performance data	
<u>Performance data open communication</u>	
Number of possible connections for open communication by means of TC blocks maximum	5
Data volume as user data per polling maximum	1 024 byte

Order No.	6GK7 242-7KX30-0XE0
Product-type designation	CP 1242-7
Performance data telecontrol	
Connection to the control center	Telecontrol Server Basic
• note	Connection to Scada system using OPC interface supported
• by means of a permanent connection	supported
• by means of a demand-oriented connection	supported
Protocol is supported	
• DNP3	No
• IEC 60870-5	No
Product function data buffering if connection is aborted	Yes
• note	up to 1000 message frames
Data volume as user data per station in telecontrol mode maximum	2 048 byte
Performance data Teleservice	
Diagnostic function online diagnostics with SIMATIC STEP 7	Yes
Product function program download with SIMATIC STEP 7	Yes
Product function remote firmware update	No
Product functions management, configuration	
Configuration software required	
Product functions Security	
Product function password protection for teleservice access	Yes
Product function encrypted data transmission	Yes
Product functions Time	
Protocol is supported NTP	Yes

Ordering data

Order No.	
Communications processor CP 1242-7¹⁾	
Communications processor for connecting SIMATIC S7-1200 to GSM/GPRS mobile wireless network	6GK7 242-7KX30-0XE0
Accessories	
Telecontrol Server Basic	
Software for	
• License for up to 8 stations	6NH9 910-0AA20-0AA0
• License for up to 32 stations	6NH9 910-0AA20-0AF0
• License for up to 64 stations	6NH9 910-0AA20-0AB0
• License for up to 256 stations	6NH9 910-0AA20-0AC0
• License for up to 1000 stations	6NH9 910-0AA20-0AD0
• License for up to 5000 stations	6NH9 910-0AA20-0AE0

Order No.	
ANT794-4MR antenna	6NH9 860-1AA00
Omnidirectional antenna for GSM (2G) and UMTS (3G) networks; weather-resistant for indoor and outdoor use; 5 m cable with fixed connection to antenna; SMA connector; including mounting bracket, screws, wall plugs	
ANT794-3M antenna	6NH9 870-1AA00
Flat panel antenna for GSM (2G) networks, for triband with 900/1800/1900 MHz; weather-resistant for indoor/outdoor use, 1.2 m cable with fixed connection to antenna; SMA connector, incl. assembly adhesive tape	

¹⁾ Please note national approvals under <http://www.siemens.com/wireless-approvals>