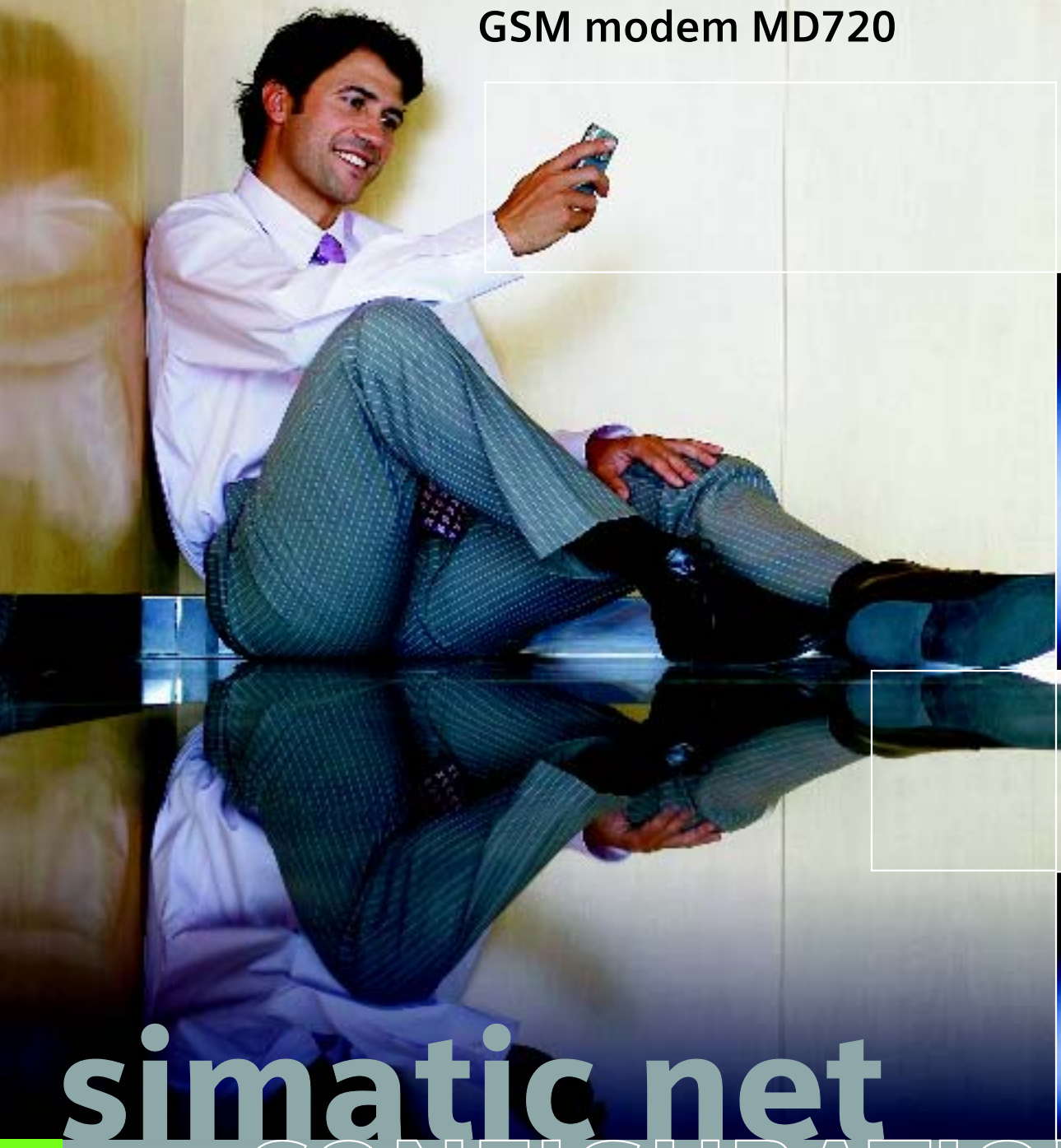
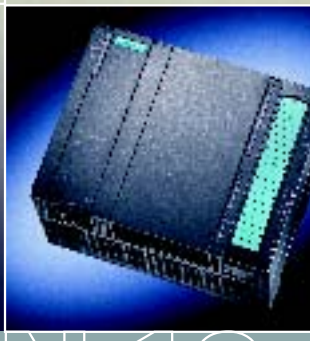
Sending and receiving SMS text messages with GSM modem MD720





simatic net

CONFIGURATION 10

SIEMENS

Sending and receiving SMS text messages with GSM modem MD720

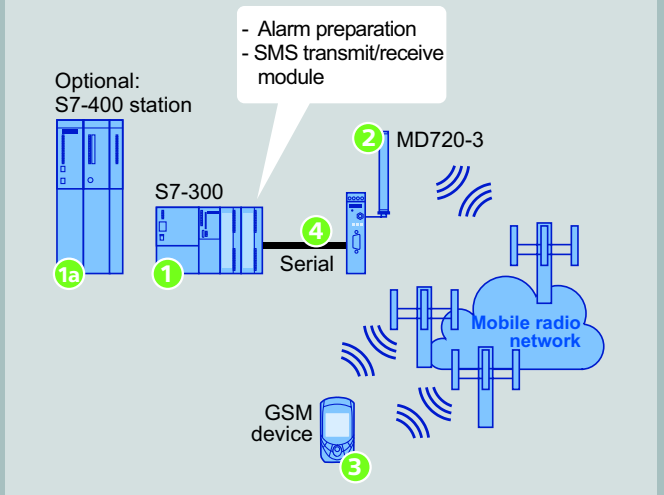
The short message service (SMS) is a service for the transmission of text messages and is based on the standardized, fully digital GSM mobile radio network (global system for mobile communications).
The messages are transmitted on the signaling channels and not on the user data channels of the GSM network. In this way, SMS messages can also be sent or received during an existing connection (e.g. telephone call).
GSM modems offer the possibility of sending data (measured values, status information, control of functions) over considerable distances using the GSM network.

SINAUT MD720-3 is a GPRS modem for connecting SIMATIC S7-200 stations via GPRS to a PC control center using SINAUT MICRO SC.
In addition, the MD720-3 can send and receive SMS as a function of a GSM modem, which means it can also be used for SIMATIC S7-300/400 controllers.
This configuration shows that a SIMATIC S7-300/400 controller is capable of sending messages about its system status using SMS via the MD720-3 and the mobile phone network to a cell phone. It also shows that the controller can receive an acknowledgment SMS from a cell phone.l

Ready to go in a flash.
SIMATIC NET Configurations

SIMATIC NET offers all components necessary for constructing integrated network solutions on the basis of open, international standards. For demanding industrial applications, SIMATIC NET makes the advantages of Ethernet usable and ensures simple integration of the fieldbus systems. SIMATIC NET configurations represent system-tested components that are recommended for typical tasks in industrial communications. For more comprehensive solutions, additional components from the wide and varied SIMATIC NET range can be added at any time.t any time.

*With the **Configuration 10** you can obtain an overview of the use of data communication via mobile radio in plants.*



Technical specifications

② SINAUT MD720-3	
Transmission rate	
RS232	300 ... 57,600 bit/s
GSM data calls	CSD 9,600 bit/s
GPRS	Class 10
■ 1 or 2 uplinks	13.4 ... 27 kbit upload gross (modem to Internet); Net about 30% lower
■ Up to 4 downlinks	40 ... 54 kbit download gross (Internet to modem);
Interfaces	
RS232	1 x 9-pin Sub-D socket
Antenna connection	1 x SMA antenna socket (50 Ohms)
Frequency ranges	850, 900, 1800, 1900 MHz
Transmitted output power	2 W at 850, 900 MHz
Current consumption	1 W at 1800, 1900 MHz
Send mode	
■ at 12 V	430 mA
■ at 24 V	140 mA
Receive mode	
■ at 12 V	90 mA
■ at 24 V	50 mA
Voltage supply	12 ... 30 V DC
Power loss	typically 5 W
Permissible ambient conditions	Max. 6,2 W
Operating temperature	- 20 °C ... +60 °C
Transport/storage temperature	- 25 °C ... +85 °C
Relative humidity	max. 95 % at +25 °C
Design	
Dimensions (W x H x D) in mm	22.5 x 99 x 114
Weight	Approx. 150 g
Assembly	Standard mounting rail
Degree of protection	IP40
Configuration	AT commands via S7-300/400 programming modules; MC45-compatible AT commands for use with SINAUT ST7 modules
National approvals	Current approvals can be found in the Internet under: **http://www.siemens.com/simatic-net/ik-info**

Ordering data

SIMATIC Components	Order No.
1 CPU 315-2 DP	**6ES7 315-2AG10-0AB0**
CP 341	**6ES7 341-1AH01-0AE0**
Power supply PS 307 5A	**6ES7 307-1EA00-0AA0**
Micro Memory Card, at least 64 KB	**6ES7 953-8LF11-0AA0**
MPI connecting cable	**6ES7 901-0BF00-0AA0**
or	
1a CPU 416-2 DP	**6ES7416-2XN05-0AB0**
CP 441-2	**6ES7441-2AA04-0AE0**
RS232 interface module	**6ES7963-1AA00-0AA0**
PS 407 10A power supply	**6ES7407-0KA02-0AA0**
MPI connecting cable	**6ES7901-0BF00-0AA0**

GSM components	Order No.
MD720-3	**6NH9 720-3AA00**
GSM quad-band antenna, omnidirectional with 5 m cable	**6NH9 860-1AA00**
Pocket LOOX T810	**Subscriber contract with a GSM network operator**
Serial cable	**6ES7 902-1AB00-0AA0**

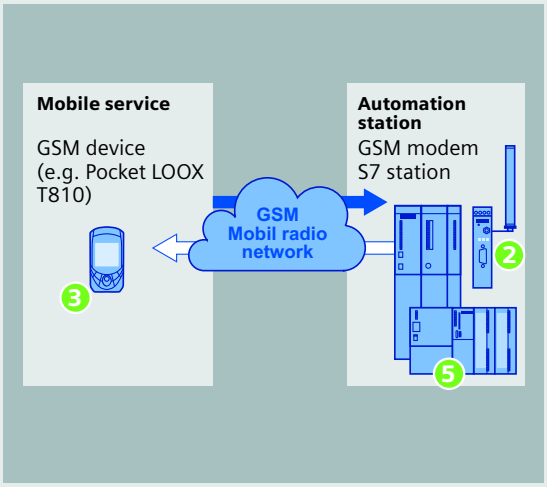
Software components	Order No.
STEP 7 V5.4 SP1	**6ES7 810-4CC08-0YA5**
S7-SCL V5.3	**6ES7 811-1CC05-0YA5**

Note:
Current ordering data for SIMATIC-, GSM and software components can be found in the Internet under:
http://www.siemens.com/automation/mall

Designed for Industry

Components

1. S7-300 with CPU 315-2 DP and CP 341 with RS232 interface
   or
1a. S7-400 with CPU 416-2 DP, CP 441-2 and interface module RS232
2. GSM modem MD720-3 with GSM antenna
3. Pocket LOOX T810 from Siemens Fujitsu
4. Serial cable
5. S7-300 with CPU 315-2 DP and CP 341



Wireless online connection to MD720-3

Automation task:

- The GSM modem MD720-3 and the communications processor (CP) are connected via the respective RS232 ports using a serial cable. A serial data exchange takes place over this connection.
- The modem is the interface to the GSM wireless network. Initiated by AT commands, it transmits and receives messages, via the GSM wireless network, which are then forwarded to the CP for further processing.

Always keep up to date!

Information on commissioning SIMATIC NET Configuration 10
www.siemens.com/simatic-net/configurations

You can reach our online support at:
www.siemens.com/automation/service&support

You can find your local Siemens partner at:
www.siemens.com/automation/partners

Configurations are not mandatory and do not make any claim to be complete in terms of configuration and equipment or any other eventualities. They do not represent any customer-specific solutions, but are only intended to offer assistance for typical tasks. You yourself are responsible for the proper operation of the described products. These configurations do not absolve you from the duty of safe handling during application, installation, operation and maintenance. By using this configuration, you acknowledge that Siemens cannot be held liable for any damage beyond the liabilities described above. Subject to change without prior notice. In the case of discrepancies between the recommendations in this configuration and other Siemens publications such as catalogs, the content of the other documentation shall take precedence.

Advantages at a glance:

- High-speed transmission of short messages to service personnel
- The code of these blocks is not write protected. It can be viewed and modified with S7 SCL and thus adapted to suit specific customer requirements
- The SMS function block FB 100 for the transmission and reception of text messages is available for each communications processor (CP 340, CP 341 and CP 441-2) in its own library

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