Teleservice

Router
Adapter for Teleservice
Teleservicemodule
Modems

REX 300, Ethernet Router

REX 300

Features
- MPI/PROFIBUS up to 12 Mbps
- Teleservice Ethernet devices over the internet
- Support for all common Simatic[1] Engineering Tools
- S7-300[1], S7-400[1] via MPI/PROFIBUS
- Configuration of the REX 300 on the web user interface through the locally connected PC or by remote control
- Configuration wizard for simple set-up
- Deployable worldwide due to its range of different modem connections, such as analog, ISDN, GPRS/EDGE and access via LAN and internet (DSL, etc.)
- Establishment of secure connections through the integrated firewall with IP filter, NAT/PAT, VPN
- Teleservice serial devices over the internet
- DNS via www.my-REX.net

REX300   **myREX24.net**

The REX 300 industrial router provides you with maximum flexibility and greatest possible security. With the router, you can remotely establish simple and secure communication with your plants.
Due to its S7-300[1] design, the REX 300 can easily be integrated into an S7-300[1] system and, with the included PG/PC interface driver, it can be used within all common Simatic[1] Engineering Tools.
The REX 300 is easy to configure via its web user interface. Irrespective of the way the connection with the internet is established (analog, ISDN, EDGE/GPRS/GSM or DSL), the integrated, application-oriented configuration wizard makes configuration of the VPN, internet, and network connection easier.
It permits ready-to-use configuration within a matter of minutes. The free my-REX services of Systeme Helmholz GmbH make it easier to access the router via the internet with dynamic name resolution or by sending e-mails from the assigned IP adress of the internet provider.
Because of the additional RS interface, in versions with a WAN connection, it is also possible to include serial devices in the remote maintenance.

VPN portal myREX24
Using the myREX24 central exchange, you bypass the time-consuming firewall pass-through authorisations or service requests for your customer or mobile telecom operator. The setting up is simplified enormously because one outgoing connection is established in each case from the point of view of the system or user. The connections are established via VPN whereby their data are transmitted encrypted.

Your benefits:
- Access via www.myREX24.net
- Configuration on myREX24
- Configuration can be downloaded
- Complete control of active connections due to comprehensive status information
- User management system
- Software for easy communication establishment

Accessory-Note
For GSM antennas, see page 88.
To connect serial devices to the REX 300 with WAN connection, an adapter cable for the RS interface is required.

Ordering Data

	Order No.
REX 300	
without VPN, analog (incl. telephone cable, Ethernet cable, Quick Start Guide)	**700-870-MDM01**
without VPN, ISDN (incl. telephone cable, Ethernet cable, Quick Start Guide)	**700-870-ISD01**
without VPN, EDGE (incl. Ethernet cable, Quick Start Guide)	**700-870-EDG01**
with VPN, analog (incl. telephone cable, Ethernet cable, Quick Start Guide)	**700-871-MDM01**
with VPN, ISDN (incl. telephone cable, Ethernet cable, Quick Start Guide)	**700-871-ISD01**
with VPN, EDGE (incl. Ethernet cable, Quick Start Guide)	**700-871-EDG01**
VPN + WAN, analog + serial interface (incl. telephone cable, Ethernet cable, Quick Start Guide)	**700-872-MDM01**
VPN + WAN, ISDN + serial interface (incl. telephone cable, Ethernet cable, Quick Start Guide)	**700-872-ISD01**
VPN + WAN, EDGE + serial interface (incl. Ethernet cable, Quick Start Guide)	**700-872-EDG01**
VPN+WAN, without Modem (incl. Ethernet cable, Quick Start Guide)	**700-873-WAN01**
Adapter cable RS interface for REX 300, 3 m, 9-way male connector	**700-879-1VK11**
Mounting rail adapter for DIN rail (optional)	**700-390-6BA01**
Mounting rail 40 mm	**700-390-1XA04**
Manual REX 300, German/English	**900-87x-REX300**

1) S7-300, S7-400 and Simatic are registered trademarks of Siemens AG.
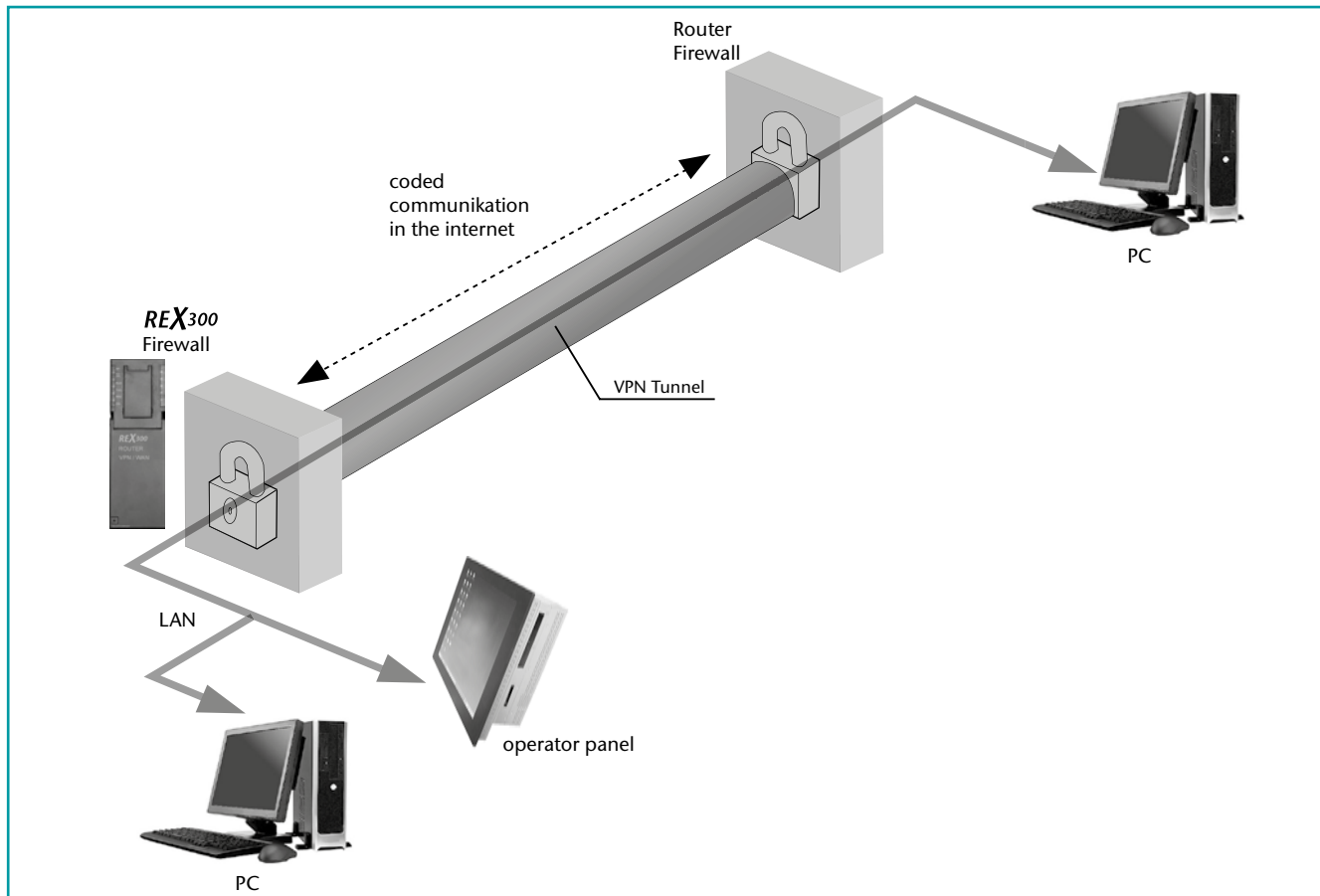
REX 300, Ethernet Router
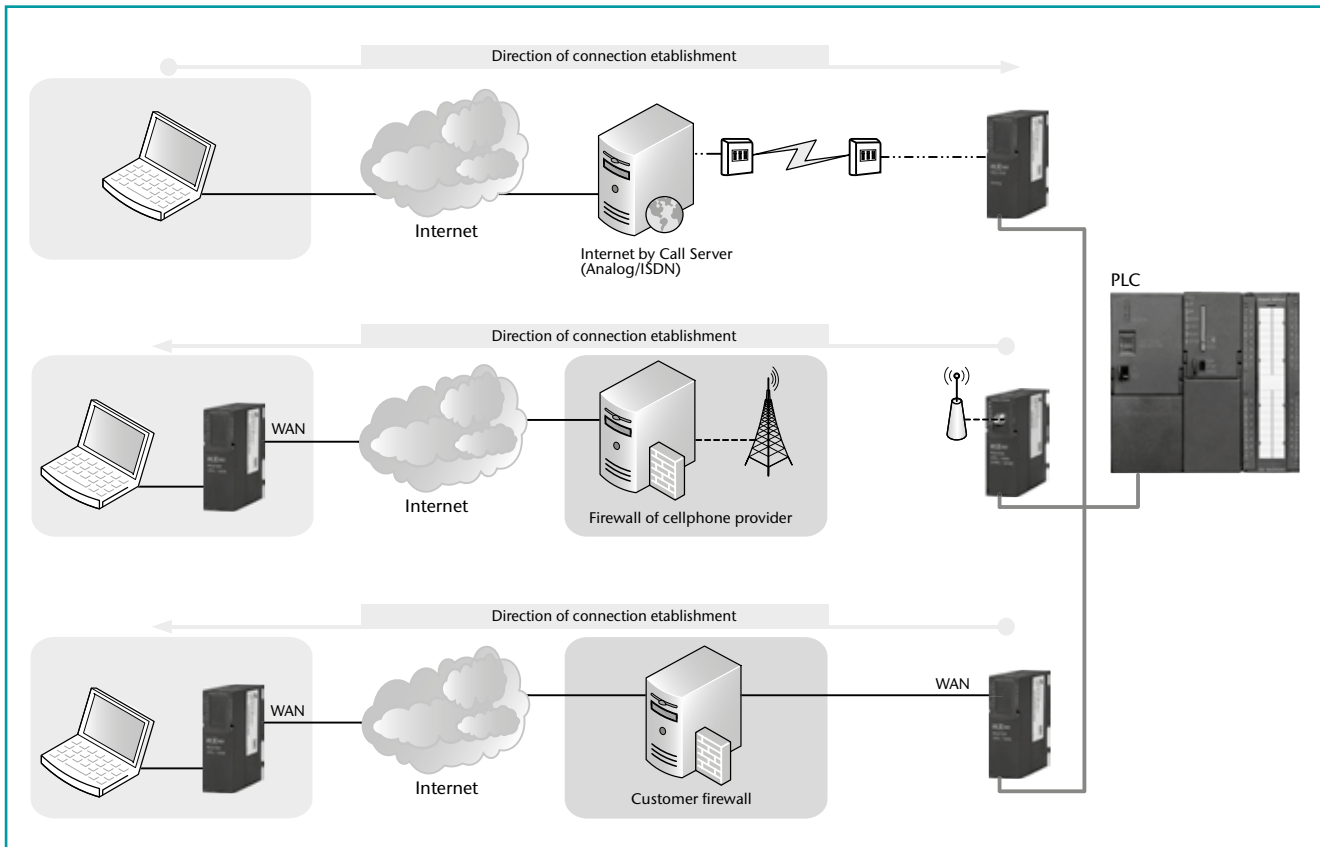
Possible connections to REX 300
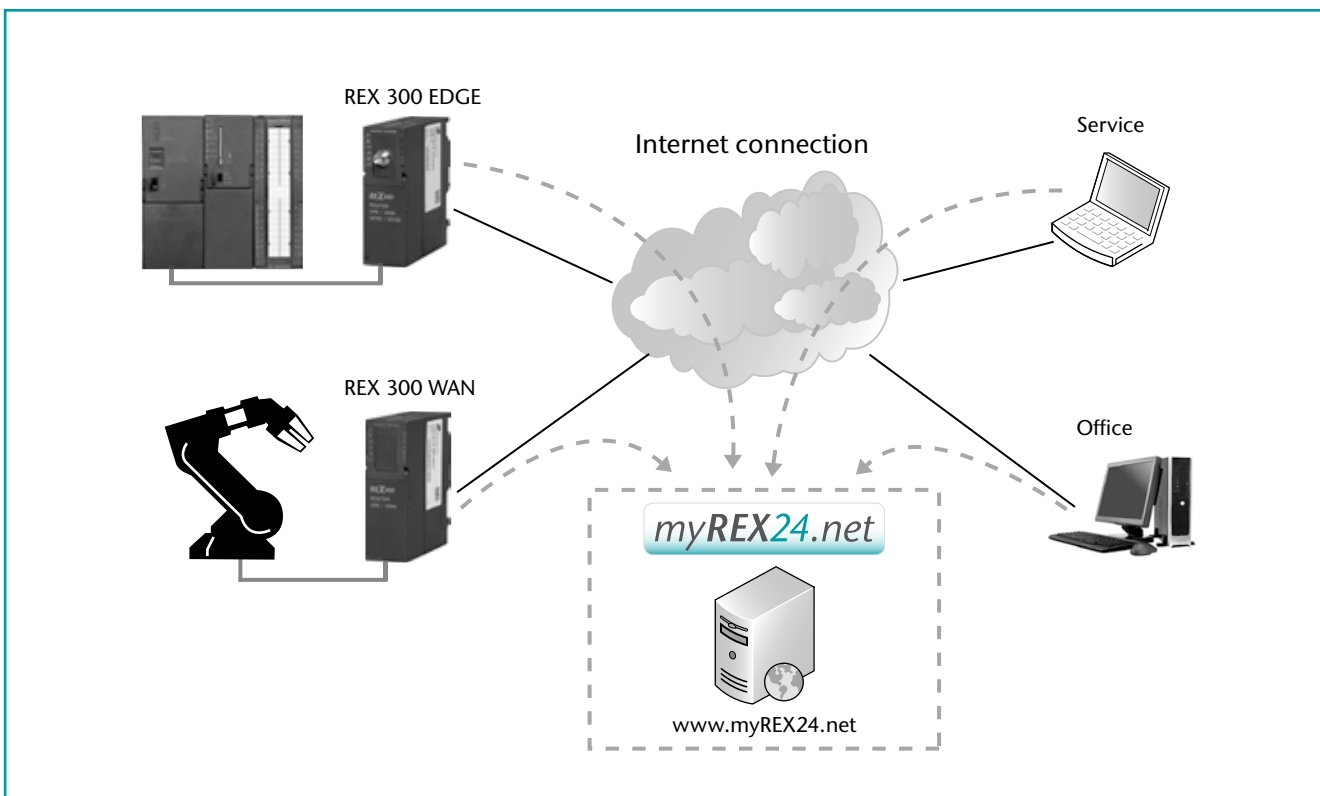
Application with myREX24

REX 300, Ethernet Router

Application example REX 300 with VPN

Technical Data	
Dimensions (D x W x H mm)	116 x 40 x 124 mm
Weight	Approx. 300 g
Modem	Analog/ISDN/ GSM (GPRS/EDGE)
Router Functions	Dial In, Dial Out, call-back function, DHCP server and client, firewall, DynDNS, NAT/PAT, SMS control
VPN	IPSec, PPTP, OpenVPN
Authentication PPP VPN	PAP, CHAP PSK, X.509 certificates
Encryption (VPN)	AES, DES/3DES
Ports LAN/WAN	100 Mbps for full and half-duplex operation, automatic detection, autosensing
MPI/PROFIBUS	RS485 - 9,6 kbps to 12 Mbps
Serial	RS232, RS485 (2- and 4-wire), RS422
Configuration Web interface	Local/remote
Power supply Voltage Current consuption	10 VDC ... 30 VDC Max. 250 mA
Ambient temperature	0 °C ... +60 °C
Degree of protection	IP 20

SSW7-TS, MPI Adapter

SSW7-TS

The SSW7-TS can be used to teleservice your system via a modem connection. For this, you can connect a commercially available external modem (analog, ISDN, GSM) to the RS232-interface of the SSW7-TS. For local use, you simply connect the RS232 interface of the SSW7-TS to your PC. The SSW7-TS automatically detects the baud rate (9.6 –115.2 kBaud) used by the PC. At the system end, you can connect the SSW7-TS to an MPI network with 187.5 or 19.2 kbps.

The PC must be installed with the teleservice module for the programming software (e.g. TeleService for Simatic STEP[1] 7) so that the SSW7-TS can be parameterized if necessary, and the modem connection maintained. Without modems or the teleservice module the SSW7-TS can be operated at the machine as a SSW7.

The voltage supply for the SSW7-TS is taken from the CPU via the MPI bus. With an optional 24 V connection it can be operated anywhere else in the system.

The SSW7-TS can also be provided with a new firmware via a modem connection. Therefore a function upgrade of an adapter already installed in the system is also possible.

Accessory-Note
DIN rail adapter, extension cables (on request) as well as multiplexers (see page 106) are available for the SSW7-TS.

By using SHTools software parameterization and diagnostic functions are possible. For firmware update a free download of the latest SHTools version is available on our website www.helmholz.com.
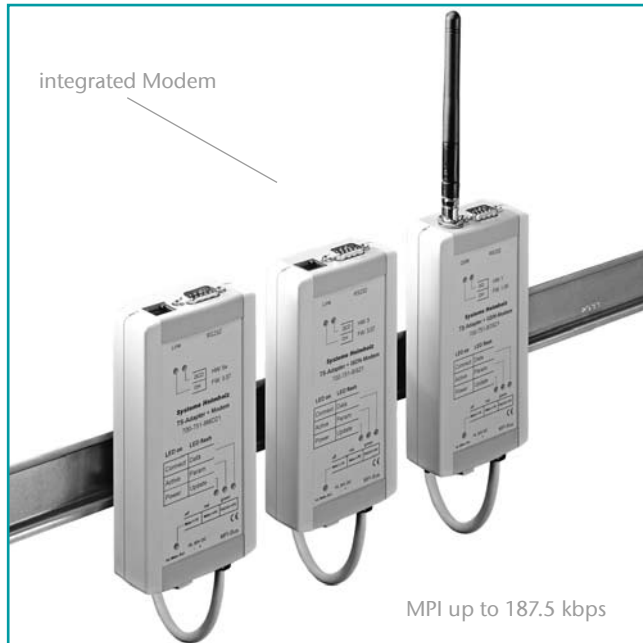
Features
- Teleservice via external modem (analog, ISDN, GSM)
- Usable with Hayes compatible modems
- Password
- Call-back function
- Online update function
- In-situ use as programming adapter
- MPI up to 187.5 kbps

Application example for SSW7-TS

Ordering Data

	Order No.
MPI-Adapter **SSW7-TS** (incl. manual, CD with software)	**700-751-8VK21**
DIN rail adapter short **Power Plug** (optional)	**700-751-HSH01** **700-751-SNT01**

1) Simatic and STEP are registered trademarks of Siemens AG.
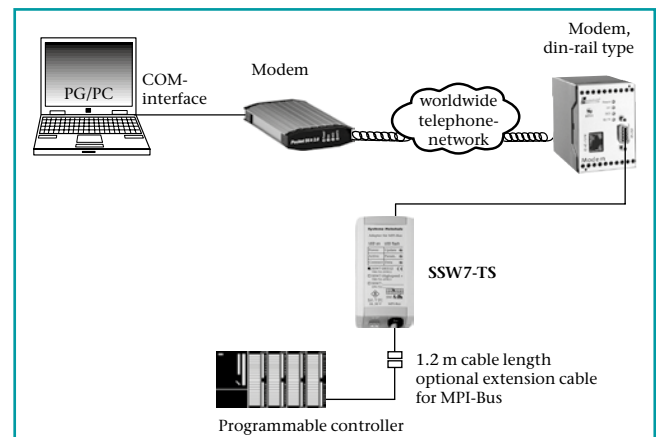
Technical Data

Technical Data	
Dimensions (D x W x H mm)	105 x 53 x 29
Weight	Approx. 180 g
Supply voltage	+24 V ±25 % from PLC or extern
Current consumption typ. max.	30 mA 45 mA
MPI interface Type	RS485
Transmission rate	19.2 or 187.5 kbps
Cable connector	SUB-D, 9-way with PG interface and terminating resistor
Communication interface Type	RS232
Transmission type	Serial asynchronous
Transmission rate	9.6 ... 115.2 kbps
Parity	Odd
Data format	8 Bit
Protocols	PC <-> S7 via modem or local
Connection	Connector, SUB-D, 9-way
Degree of protection	IP 20

SSW7-TS with Modem; analog/ISDN/GSM

integrated Modem

MPI up to 187.5 kbps

SSW7-TS with Modem

Features

- MPI up to 187.5 kbps
- Teleservice and in-situ use
- Password protection and call-back function
- RS232-interface
- Online update function
- DIN rail adapter for mounting included in scope of supply

Application example for SSW7-TS with Modem analog

The SSW7-TS with integrated modem is a low-cost alternative for teleservicing a programmable controller via the MPI bus. Depending on the version, an analog, ISDN, or GSM modem is integrated in the housing of the SSW7-TS. The analog modem can be configured for worldwide use. The ISDN variant supports the DSS1 protocol that is used in many countries. All connecting cables required for operation are included. The SSW7-TS with a GSM modem (quadband) is the right choice for mobile use or if a telephone connection is not available.

Via the serial interface, the SSW7-TS with modem can also be used as a PC adapter for local use. The modem can be used for teleservicing a VISU/SCADA application even without a TS adapter function. Settings are made using microswitches on the adapter housing.

The SSW7-TS with modem receives its power supply from the CPU via the MPI cable. If no 24 V supply is available at the connection point, it is possible to feed in an external 24 V power supply.
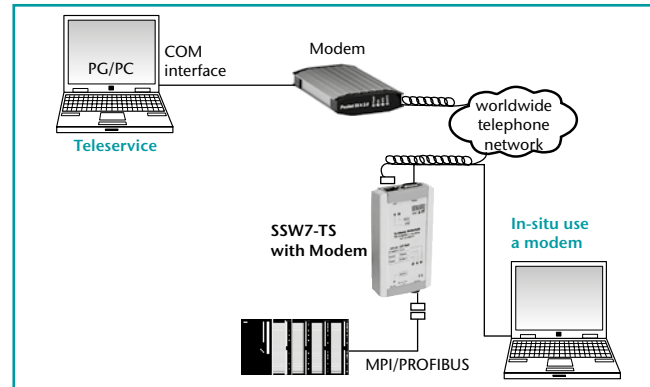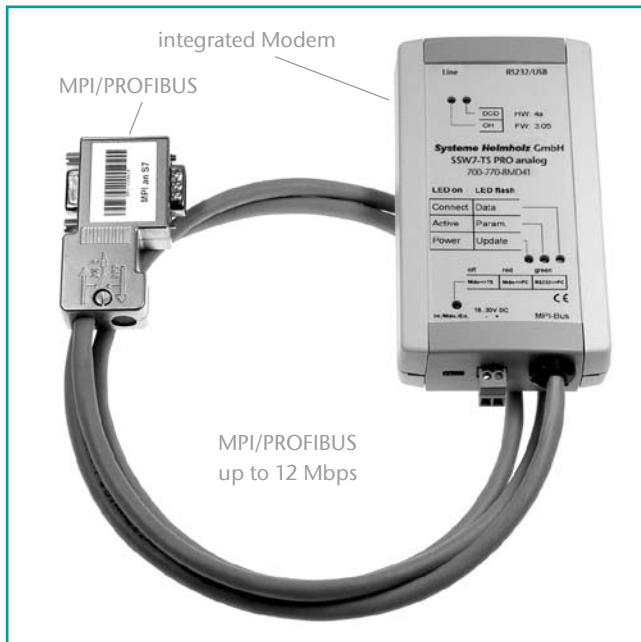
The SSW7-TS with modem can also be updated with new firmware via a modem link.

That enables functional expansion of an adapter already installed in the system.

Accessory-Note

Systeme Helmholz GmbH always provides the latest version of the required SHTools software on its website for downloading. The SSW7-TS with GSM modem requires a SIM card with CSD service (Circuit Switched Data) activated and a suitable GSM antenna (see page 88).

Ordering Data	
	Order No.
MPI-Adapter **SSW7-TS with modem analog** (incl. DIN rail adapter, 2 x telephone cable RJ11 + TAE each 3 m, 3 m programming cable, manual, CD with software)	**700-751-8MD21**
SSW7-TS with modem ISDN (incl. DIN rail adapter, RJ11 telephone cable 3 m; 3 m programming cable, manual, CD with software)	**700-751-8IS21**
SSW7-TS with modem GSM (incl. DIN rail adapter, 3 m programming cable, manual, CD with software)	**700-751-8GS21**
Power Plug (optional)	**700-751-SNT01**

Technical Data	
Dimensions (D x W x H mm)	135 x 67 x 30
Weight	Approx. 240 g
Supply voltage	+24 V ±25 % from PLC or extern
Current consumption	Analog/ISDN approx. 100 mA, GSM approx. 150 mA
MPI interface Type	RS485
Transmission rate	19.2 or 187.5 kbps
Cable connector	SUB-D, 9-way with PG interface and terminating resistor
Communication interface Type	RS232; 2-wire dial-up (analog); ISDN S_O
GSM-Frequency	Quadband: GSM850, EGSM900, DCS1800, PCS1900
Transmission type	Serial asynchronous
Transmission rate	9.6 ... 115.2 kbps
Protocols	PC <-> S7 via modem or local
Connection	Connector, SUB-D, 9-way RJ11 or SIM card slot
Degree of protection	IP 20

SSW7-TS PRO analog/ISDN/GSM

SSW7-TS PRO; analog

Features

- MPI/PROFIBUS up to 12 Mbps; autobaud
- Teleservice and in-situ use
- Password protection and call-back function
- RS232 and USB interface
- Remote updating possible
- New feature: Transmission of any SMS messages from the PLC

Application example for SSW7-TS PRO analog/ISDN/GSM

The SSW7-TS PRO can be used for teleservicing a S7 system via a modem connection and supports connection of the system to an MPI or PROFIBUS network with up to 12 Mbps.

Depending on the version, an analog, ISDN, or GSM modem is integrated in the housing of the SSW7-TS PRO. The analog modem can be configured for worldwide use. The ISDN variant supports the DSS1 protocol that is used in many countries. The SSW7-TS PRO GSM is the right choice for mobile use or if a telephone connection is not available.

In addition to use as a remote service solution, the SSW7-TS PRO can also be used locally as a PC adapter via its RS232 or USB interface.
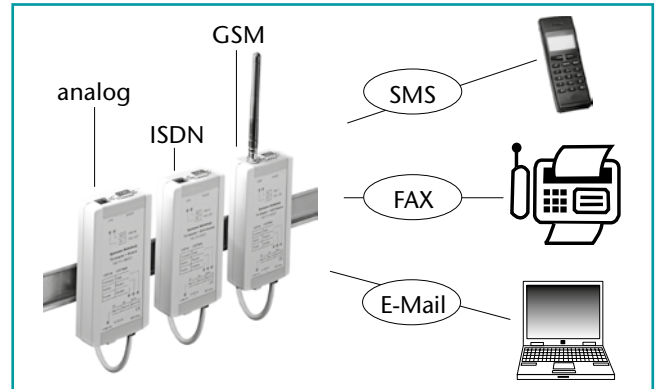
The MPI/PROFIBUS connecting cable of the SSW7-TS PRO is not a spur line because of the repeater integrated into the connector. It allows the adapter to be connected at any point along the bus even at 12 Mbps.

The SSW7-TS PRO usually draws its power supply via the MPI/PROFIBUS connecting cable or, if necessary, via the external power source. Using the free software SHTools, firmware updates can be transmitted directly via the RS232/USB and via the modem connection on the SSW7-TS PRO.

As a new feature, the SSW7-TS PRO now also supports transmission of any SMS messages. SMS transmission is triggered by calling the SMS_SEND function block from the programmable controller. Depending on the SMS service provider used, it is also possible to send messages to an e-mail address or fax machine.

Accessory-Note

The SSW7-TS PRO GSM additionally requires a SIM card with the CSD service (Circuit Switched Data) activated and a suitable GSM antenna. (For GSM antennas, see page 88).

Ordering Data

	Order No.
MPI-Adapter **SSW7-TS PRO analog** (incl. DIN rail adapter, 2x telephone cable RJ11 + TAE each 3 m, 3 m programming cable, USB cable, manual, CD with software)	700-770-8MD41
SSW7-TS PRO ISDN (incl. DIN rail adapter, RJ11 telephone cable 3 m, 3 m programming cable, USB cable, manual, CD with software)	700-770-8IS41
SSW7-TS PRO GSM (incl. DIN rail adapter, 3 m programming cable, USB cable, manual, CD with software) (**GSM antennas** see page 88)	700-770-8GS41
Power Plug (optional)	700-751-SNT01

Technical Data

Technical Data	
Dimensions (D x W x H mm)	130 x 67 x 30
Weight	Approx. 240 g
Supply voltage	+24 V ±25 % from PLC or extern
Current consumption	Approx. 130 mA
MPI interface Type	RS485
Transmission rate	9.6 kbps - 12 Mbps
Cable connector	SUB-D, 9-way with PG interface and terminating resistor
Communication interfaces Type	RS232; 2-wire dial-up (analog), ISDN S_O; USB
GSM-Frequency	Quadband: GSM850, EGSM900, DCS1800, PCS1900
Transmission type	Serial asynchronous/USB
Transmission rate	9.6 ... 115 kbps
Data format	8 Bit
Protocols	PC <-> S7 via modem or local
Connection	Connector, SUB-D, 9-way RJ11; Mini-USB female connector
Degree of protection	IP 20

TS 300, Teleservicemodule for the PLC Rack

TS 300, Teleservicemodule for the PLC-Rack

Features
- MPI up to 187.5 kbps
- TS adapter in the S7 rack for Teleservice
- Analog, ISDN, GSM
- USB interface for parameterization or in-situ use
- Password protection
- Call-back function
- Online update function
- Alert functions and switch outputs usable via back plane bus
- Mode change via Teleservice
- Up to two alarm messages can be transmitted by SMS per module
- Communication via the backplane bus possible[1]

With the TS 300, teleservice of a system can be performed via the MPI bus.

The TS 300 has a single-width S7-300[2] housing for mounting on the sectional rail. A 56k modem is integrated into the housing of the TS 300 that is prepared for use worldwide. A flash update is no longer necessary. TAE and RJ11 cables are included in the scope of supply. As alternatives, versions with ISDN or GSM modem are also available.

The TS 300 can establish an MPI link with the CPU via the backplane bus. The power supply is also drawn from the backplane bus. Therefore, for installation of a teleservice solution, only the phone line is required.

The TS 300 does not need to be configured in the hardware configuration of the PLC and can therefore be retrofitted at any time. Alternately, the TS 300 can be powered from an external 24 V source. The MPI connection can also be established via the 9-way sub D jack on the front.

An additional USB connection is used to parameterize the TS 300, for in-situ use as a PC adapter, or for direct use of the internal modem.

The TS 300 can also be updated with a new operating system via a remote link. That enables functional expansion of a TS 300 already installed in the system.

By using SHTools software parameterization and diagnostic functions are possible. For firmware update a free download of the latest SHTools version is available on our website www.helmholz.com.

Accessory-Note
For GSM antennas, see page 88.

Ordering Data

	Order No.
TS 300 with modem analog (incl. 3 m USB cable, 2x telephone cable RJ11+TAE each 3m, manual, CD with software)	700-753-8MD21
TS 300 with modem ISDN (incl. 3 m USB cable, 1x RJ11 telephone cable 3m, manual, CD with software)	700-753-8IS21
TS 300 with modem GSM (incl. 3 m USB cable, manual, CD with software) (**GSM antennas** see page 88)	700-753-8GS21
MPI-connecting cable, 0.5 m **Mounting rail Adapter** for DIN rail (optional) **Mounting rail** 40 mm	700-753-6VK11 700-390-6BA01 700-390-1XA04

1) It is advised against a MPI functionality at the back plane bus when using the following CPUs: S7-315 2 DP/PN, S7-317, S7-318 and S7-319   State: 06-2007

2) S7-300 is a registered trademark of Siemens AG

TS 300, Teleservicemodule for the PLC Rack

Technical Data			
	TS 300 analog	**TS 300 ISDN**	**TS 300 GSM**
Degree of protection	IP 20	IP 20	IP 20
Dimensions (D x W x H)	116 x 40 x 124 mm	116 x 40 x 124 mm	116 x 40 x 124 mm
Weight	Approx. 280 g	Approx. 280 g	Approx. 280 g
Operating voltage	DC +24 V ± 25 %, external or 5 V via backplane bus	DC +24 V ± 25 %, external or 5 V via backplane bus	DC +24 V ± 25 %, external
Current consumption	Approx. 500 mA (backplane bus) Approx. 140 mA (external	Approx. 500 mA (backplane bus) Approx. 140 mA (external	Approx. 50 mA (backplane bus) Approx. 170 mA (external)
Ambient temperature	0 °C to +60 °C	0 °C to +60 °C	0 °C to +60 °C
MPI interface Type	RS485	RS485	RS485
Transmission rate	19.2 or 187.5 kbps	19.2 or 187.5 kbps	19.2 or 187.5 kbps
Connection	SUB-D, 9-way socket or via backplane bus	SUB-D, 9-way socket or via backplane bus	SUB-D, 9-way socket or via backplane bus
USB communication interface Type Connection	USB 2.0, USB 1.1 compliant USB-B socket for internal modem or TS adapter	USB 2.0, USB 1.1 compliant USB-B socket for internal modem or TS adapter	USB 2.0, USB 1.1 compliant USB-B socket for internal modem or TS adapter
Transmission rate	9.6 kbps to 115.2 kbps via virtual COM port	9.6 kbps to 115.2 kbps via virtual COM port	9.6 kbps to 115.2 kbps via virtual COM port
Modem	Analog interface 56 kbps (V.92)	ISDN S0 interface acc. to ITU I.430, 64 kbps	Quadband: GSM850, EGSM900, DCS1800, PCS1900
Modem connection	RJ-11 socket	RJ-11 socket	3 V SIM card, FME connector for antenna
SMS transmission	2	2	2
Transmission standards	V.90, V.34+, V.34, V.32bis, V.32, V.22, V.22bis, V.21, V.23, BELL standard 103, 212 Fax Class 1, Fax Class 2	Transmission in D channel at 9,600 bps (X.31-D) Transmission in B channel at 64.000 bps (X.31-B))	Class 4 (2 W) for GSM850/ EGSM900 Class 1 (1W) for DCS1800/PCS1900
Protocols		B channel: V.110, X75, X25/ X31, HDLC (transparent) D channel: DSS1, X.31	

MDM 300, Modem for the S7 Rack

MDM 300 modem for the S7 Rack

The MDM 300 of Systeme Helmholz GmbH is a universal modem that can be installed in a single-wide S7-300[1] housing for the sectional rail. A 56k modem is integrated into the housing of the MDM 300 that is prepared for use worldwide. Alternatively versions with ISDN or GSM functionality are also available.
Besides teleservice of a VISU/SCADA system, the main application is global data exchange.
By using SHTools software parameterization and diagnostic functions are possible. For firmware update a free download of the latest SHTools version is available on our website www.helmholz.com.

Accessory-Note
For GSM antennas, see page 88.

Features
- RS232 9-way and USB with virtual COM port
- Destination countries worldwide (analog)
- Power supply via backplane bus or external 24 V
- SMS transmission (analog, ISDN)
- 2 digital inputs for transmitting SMS
- 2 outputs can be switched via telephone call
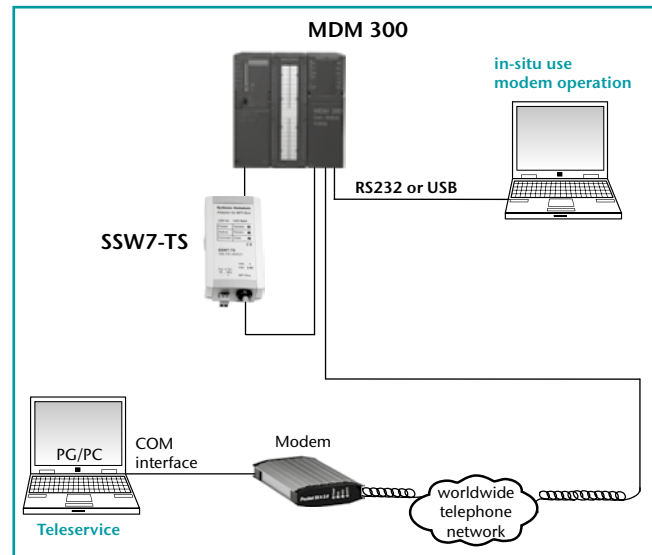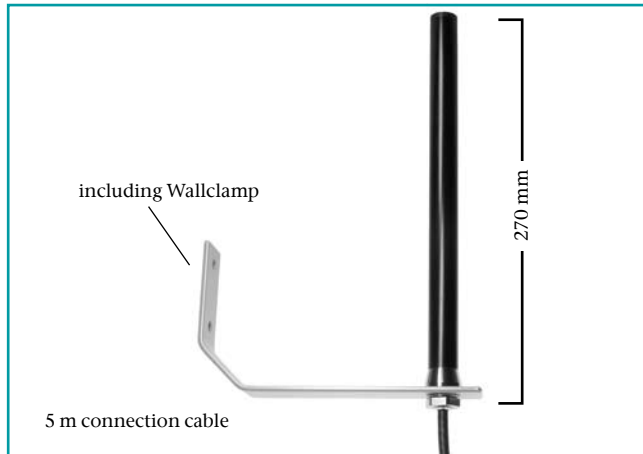

Application example MDM 300

Ordering Data	
	Order No.
MDM 300 analog (incl. RJ11 + TAE cable each 3m, RS232 connecting cable, USB cable, manual, CD with software)	700-754-1MD11
MDM 300 ISDN (incl. RJ11 cable 3m, RS232 connecting cable, USB cable, manual, CD with software)	700-754-1IS11
MDM 300 GSM (incl. RS232 connecting cable, USB cable, manual, CD with software) (**GSM antennas** see page 88)	700-754-1GS11
Modem cable, 2 m **Mounting rail Adapter** for DIN rail (optional) **Mounting rail** 40 mm	700-754-7VK11 700-390-6BA01 700-390-1XA04

1) S7-300 is a registered trademark of Siemens AG

MDM 300, Modem for the S7 Rack

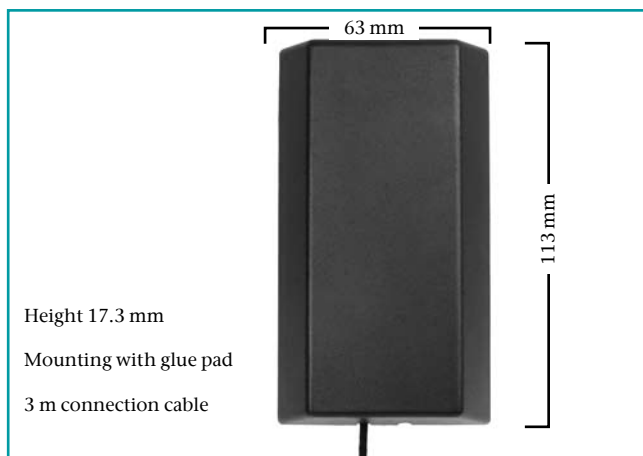| Technical Data			
	MDM 300 analog	**MDM 300 ISDN**	**MDM 300 GSM**
Degree of protection	IP 20	IP 20	IP 20
Dimensions (D x W x H)	116 x 40 x 124 mm	116 x 40 x 124 mm	116 x 40 x 124 mm
Weight	Approx. 280 g	Approx. 280 g	Approx. 280 g
Operating voltage	DC +24 V ± 25 %, external or 5 V via backplane bus	DC +24 V ± 25 %, external or 5 V via backplane bus	DC +24 V ± 25 %, external
Current consumption	Approx. 350 mA (backplane bus) Approx. 120 mA (external	Approx. 350 mA (backplane bus) Approx. 120 mA (external)	Approx. 50 mA (backplane bus) Approx. 200 mA (external)
Ambient temperature	0 °C to + 60 °C	0 °C to + 60 °C	0 °C to + 60 °C
Number of inputs (in groups of)	2/2	2/2	2/2
Number of outputs (in groups of)	2/2	2/2	2/2
Communication interface	USB and RS232	USB and RS232	USB and RS232
USB interface Type	USB-B socket USB 2.0, USB 1.1 compliant	USB-B socket USB 2.0, USB 1.1 compliant	USB-B socket USB 2.0, USB 1.1 compliant
Transmission rate	9.6 kbps to 115.2 kbps via virtual COM port	9.6 kbps to 115.2 kbps via virtual COM port	9.6 kbps to 115.2 kbps via virtual COM port
RS232 interface	RS232, Sub-D 9-way socket	RS232, Sub-D 9-way socket	RS232, Sub-D 9-way socket
Transmission rate	9.6 kbps to 115.2 kbps	9.6 kbps to 115.2 kbps	9.6 kbps to 115.2 kbps
Modem	Analog interface 56 kbps (V.92)	ISDN-S0 interface acc. to ITU I.430, 64 kbps	Quadband: GSM850, EGSM900, DCS1800, PCS1900
Modem connection	RJ-11 socket	RJ-11 socket	3 V SIM card, FME connector for antenna
SMS transmission	2	2	2
Transmission standards	V.90, V.34+, V.34, V.32bis, V.32, V.22, V.22bis, V.21, V.23, BELL standard 103, 212 Fax Class 1, Fax Class 2	Transmission in D channel at 9.600 bps (X.31-D) Transmission in B channel at 64.000 bps (X.31-B)	Class 4 (2 W) for GSM850/ EGSM900 Class 1 (1 W) for DCS1800/PCS1900
Protocols		B channel: V.110, X75, X25/ X31, HDLC (transparent) D channel: DSS1, X.31	

Antennas for GSM Modems

including Wallclamp

270 mm

5 m connection cable

Static triband antenna for wall mounting (in- and outside)

90 mm

2.5 m connection cable

Quadband magnetic base antenna

63 mm

113 mm

Height 17.3 mm

Mounting with glue pad

3 m connection cable
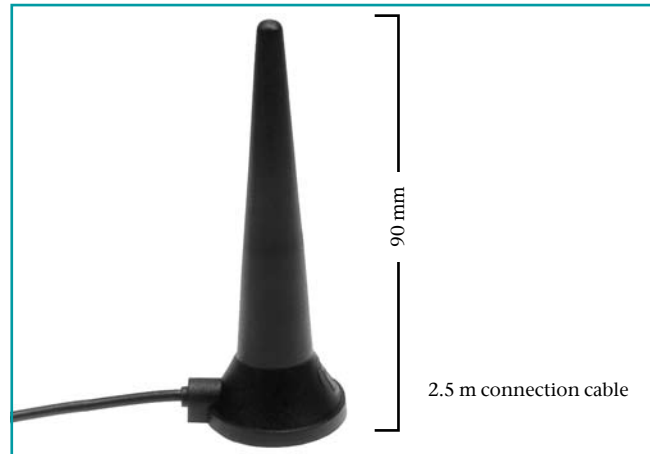
Patch triband antenna for wall mounting (inside)

100 mm

Portable quadband antenna with integrated knee-joint for mobile use

To ensure the function of the GSM radio system in a – in most cases special – industrial environment, it is important to select a Systeme Helmholz GSM antenna an advance for the greatest possible reliability.

Despite careful planning, the quality and speed of transmission always also depend on the level of development of and load on the GSM network.

To increase the flexibility still further, corresponding GSM extensions of various lengths are available as accessories for the antennas offered.

Outdoor antenna

The stationary triband antenna is a non-directional station antenna with a gain of up to 2 dBi. It is protected in a robust and weatherproof GFK conduit, is supplied with a wall mount, and is therefore especially suitable for mounting on vertical surfaces, such as building walls etc. It can be used equally well both outdoors and indoors. Metal surfaces should not be located in proximity to the emitting antenna. The 5 m long connecting able is permanently connected to the antenna.

Magnetic base antenna

The quadband magnetically adhering antenna supports all relevant GSM radio frequencies. It adheres reliably to all magnetic surfaces because of its strong permanent magnet. Due to its compact dimensions, this omnidirectional antenna is ideal for mounting on the top or side of a cabinet. The 2.5 m long connecting cable provides a sufficient radius of action for this and is permanently connected to the antenna.

Top-mounting antenna

Patch antenna with a flat, robust design for indoor use. It is fixed by means of an adhesive pad on preferably horizontal surfaces. It functions independently of external grounding surfaces and can be mounted on nearly any material. The 3 m long connecting cable is permanently attached and can exit in the horizontal or vertical direction.

Portable antenna

Small omnidirectional antenna for direction connection to the GSM modem. Implemented as a dipole antenna, it ensures mobile use in the 900/1800 MHz band. For this type of antenna, a minimum clearance of 60 cm from other antennas and standing metal parts must be ensured on all sides in the application. The direction of emission can be optimized with the integrated knee-joint.

The antennas can be used in conjunction with the following products:
REX 300, SSW7-TS PRO, SSW7-TS with modem, TS 300 and MDM 300 in the GSM variant in each case.

Ordering Data	
	Order No.
Local triband antenna	700-751-ANT01
Quadband magnetic base antenna	700-751-ANT02
Patch triband antenna	700-751-ANT03
Portable quadband antenna	700-751-ANT04
GSM antenna extension cable, 5 m	700-751-ANTK01
GSM antenna extension cable, 10 m	700-751-ANTK02
GSM antenna extension cable, 15 m	700-751-ANTK03