MPI-BUS

Programming Adapter
PPI-Cable
Accessory
RK512- and HMI-Adapter

SSW7, MPI-Programming Adapter

SSW7

Features

- Programming and visualization
- Transmission rate up to 115 kBaud
- MPI up to 187,5 kbps
- Power supply via programming device or via external 24 V supply

Application for SSW7

The SSW7 permits connection of a PC or laptop with programming software to programmable controllers via any standard COM port.

The RS232 interface of the SSW7 has automatic baudrate detection for adaptation to the set baudrate (between 9.6 to 115 kbps). The MPI interface operates with 187.5 kbps or 19.2 kbps.

The SSW7 receives it´s voltage supply from the CPU via the MPI bus. With an optional 24 V connection it can be used anywhere else in the system.

With the included speed-up tool you can attain the max. transmission rate of the SSW7 with every programming software.
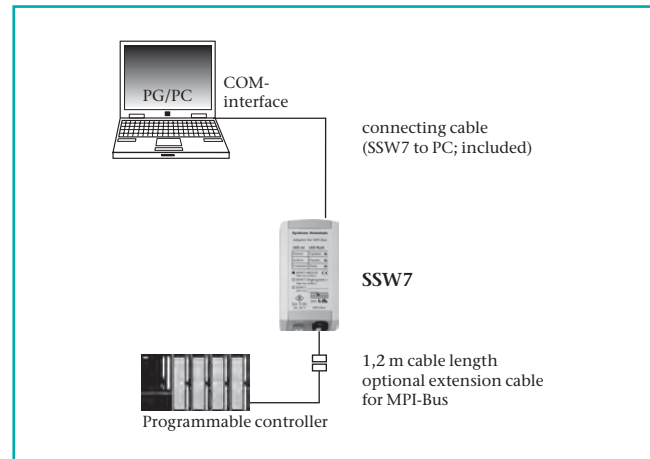
Accessory-Note
DIN rail clips, extension cables (see page 74) as well as multiplexers (see page 53) are available for the SSW7.

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

Ordering Data	
	Order-No.
MPI-Adapter **SSW7, RS232** (incl. 3 m programming cable) **SSW7, RS422**	700-751-1VK21 700-752-1VK21
DIN rail adapter short **Power Plug** (optional)	700-751-HSH01 700-751-SNT01
Manual SSW7, MPI adapter German/English	900-751-1VK21

Technical Data	
SSW7	
Dimensions (DxWxH 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
Communication interface Type	RS232/RS422
Transmission type	serial asynchronous
Transmission rate	19.2 kbps to 115.2 kbps
Parity	odd
Data format	8 Bit
Protocols	PC <-> S7
Connection	connector, SUB-D, 9-way
Degree of protection	IP 20

SSW7-USB, MPI-Programming Adapter USB

SSW7-USB

Features

- Programming and visualization via USB
- Supply Voltage via USB
- Virtual COM-port for flexible applications
- MPI up to 187,5 kbps

Application for SSW7-USB

The SSW7-USB permits conversion from a USB interface to the MPI bus for programming software or visualization.
The SSW7 has a 1.2 m long MPI connecting cable, which can be directly plugged into the CPU socket of the programmable controller or at any other point in the MPI network.
The housing of the SSW7-USB contains a type „B" USB socket. The SSW7-USB can be connected to the PC via the USB cable supplied. The SSW7-USB is powered from the PC. The SSW7-USB can therefore be used at any point in the MPI bus.
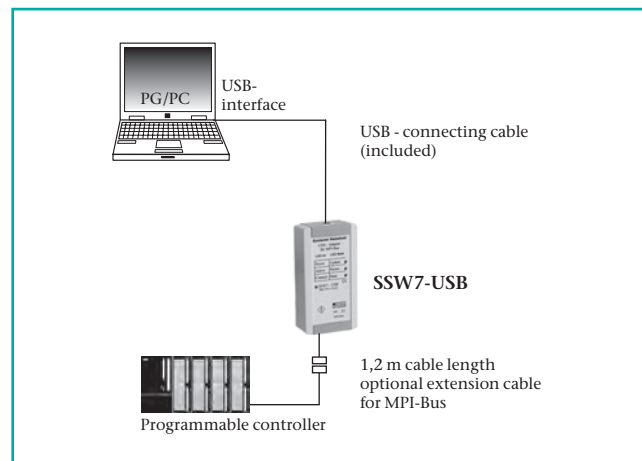A driver for creating a virtual com-port is included.

Accessory-Note
DIN rail clips, extension cables (see page 74) as well as multiplexers (see page 53) are available for the SSW7-USB.

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

Ordering Data	
	Order-No.
MPI-Adapter **SSW7-USB** (incl. 3 m USB cable)	**700-755-1VK21**
DIN rail adapter short	**700-751-HSH01**
Manual SSW7-USB, German/English	**900-755-1VK21**

Technical Data	
SSW7-USB	
Dimensions (DxWxH mm)	105 x 53 x 29
Weight	approx. 180 g
Supply voltage	5 V via USB
Current consumption	approx. 150 mA
MPI interface Type	RS485
Transmission rate	19.2 or 187.5 kbps
Cable connector	SUB-D, 9-way
Communication interface Type	USB 1.1
Protocols	PC <-> S7
Connection	USB-B female
Degree of protection	IP 20

SSW7-RK512, SSW7-HMI, MPI-Adapter with RK512/HMI Protocol

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┌─────────────────────────────────────────┐
│  ┌──────────────┬───┐                     │
│  │ Visualization eq.│ R │                   │
│  │ operator terminals│ K │  RS232 or        │
│  │ or other thirdparty│ 5 │  RS422          │
│  │ equipment     │ 1 │                      │
│  │              │ 2 │                       │
│  └──────────────┴ p ┘                      │
│              r o t o c o l                  │
│                         customized         │
│                         connecting cable    │
│                                            │
│                    [SSW7-RK512]             │
│                                            │
│  1.2 m cable length                         │
│                                            │
│    optional extension cable                 │
│         for MPI-Bus                         │
│                    Programmable controller  │
└─────────────────────────────────────────┘
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SSW7-RK512

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┌─────────────────────────────────────────┐
│  ┌──────────────┬───┐                     │
│  │ Visualization eq.│ H │                   │
│  │ operator terminals│ M │  RS232          │
│  │ or other thirtdparty│ I │                │
│  │ equipment     │   │                      │
│  └──────────────┴ p ┘                      │
│              r o t o c o l                  │
│                         customized         │
│                         connecting cable    │
│                                            │
│                    [SSW7-HMI]               │
│                                            │
│  1.2 m cable length                         │
│                                            │
│    optional extension cable                 │
│         for MPI-Bus                         │
│                    Programmable controller  │
└─────────────────────────────────────────┘
```

SSW7-HMI

SSW7-RK512

With the SSW7-RK512 you can connect any operator terminals, visualization equipment, or other third-party equipment to the S7 if they support the RK512 protocol without adapting the software.

The SSW7-RK512 transmits data blocks, flags, inputs and outputs. The MPI settings of the SSW7-RK512 can be changed with a parameterization program or with special RK512 frames in order to connect several SSW7-RK512s or several PLCs to an MPI bus.

The RS232 interface of the SSW7-RK512 has automatic baudrate detection for adapting itself to the connected device (between 9.6 and 115 kbps). The MPI interface operates with 187.5 kbps.

The voltage supply for the SSW7-RK512 is taken from the CPU via the MPI bus. With an optional 24 V connection it can be operated anywhere else in the system.

We supply the SSW7-RK512 with an additional programming interface on the connector including switchable terminating resistor.

Accessory-Note

DIN rail clips, extension cables (see page 74) as well as multiplexers (see page 53) are available for the SSW7-RK512 and the SSW7-HMI.

By using the enclosed SHTools software are parameterization and diagnostic functions possible. For a firmware update is a free download of the latest SHTools version on our website www. helmholz.com available.
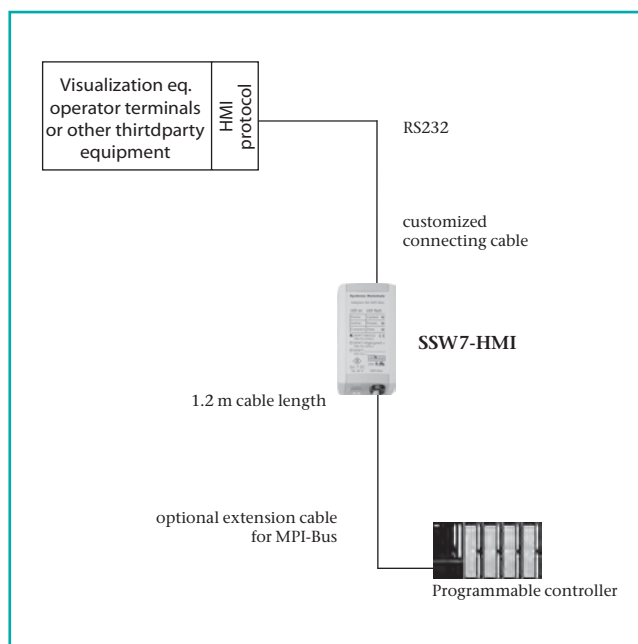
SSW7-HMI

The SSW7-HMI is intended for use with operator terminals, visualization equipment or other third-party equipment that supports the Siemens HMI protocol.

The baudrate of the adapter is set by the protocol (between 9.6 and 115 kbps).

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

We supply the SSW7-HMI with an additional programming interface on the connector including switchable terminating resistor.

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

Ordering Data	
	Order-No.
MPI-Adapter	
SSW7-RK512	700-751-5VK21
SSW7-RK512 with RS422 interface	700-752-5VK21
DIN rail adapter short	700-751-HSH01
Power Plug (optional)	700-751-SNT01
Manual SSW7-RK512, german/english	900-751-5VK21
Manual SSW7-RK512/RS422, German/English	900-752-5VK21

Ordering Data	
	Order-No.
MPI-Adapter	
SSW7-HMI	700-751-9VK21
DIN rail adapter short	700-751-HSH01
Power Plug (optional)	700-751-SNT01
Manual SSW7-HMI, German/English	900-751-9VK21

SSW7-RK512, SSW7-HMI, MPI-Adapter with RK512/HMI Protocol

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Technical Data			
	SSW7-RK512	**SSW7-RK512 with RS422**	**SSW7-HMI**
	700-751-5VK21	**700-752-5VK21**	**700-751-9VK21**
Dimensions (DxWxH mm)	105 x 53 x 29	105 x 53 x 29	105 x 53 x 29
Weight	approx. 180 g	approx. 180 g	approx. 180 g
Supply voltage (from AG or current supply)	+24 V ±25 %	+24 V ±25 %	+24 V ±25 %
Current consumption	approx. 70 mA	approx. 70 mA	approx. 70 mA
MPI-Schnittstelle Type	RS485	RS485	RS485
Transmission rate	187.5 kbps	187.5 kbps	19.2 or 187.5 kbps
Cable connector	SUB-D, 9-way with PG interface and witerminating resistor	SUB-D, 9-way with PG interface and witerminating resistor	SUB-D, 9-way with PG interface and witerminating resistor
Communication interface Type	RS232	RS422	RS232
Transmission type	serial asynchronous	serial asynchronous	serial asynchronous
Transmission rate	19.2 ... 115.2 kbps	19.2 ... 115.2 kbps	4.800 ... 115.2 kbps
Parity	even	even	odd
Data format	8 Bit	8 Bit	8 Bit
Protocols	RK512 with 3964/R	RK512 with 3964/R	HMI
Connection	connector, SUB-D, 9-way	connector, SUB-D, 9-way	connector, SUB-D, 9-way
Degree of protection	IP 20	IP 20	IP 20

## MPI-Accessory, SSW200

DIN rail adapter

For all SSW7- and NETLink® PRO/USB adapter, we provide DIN rail adapters as an accessory.
The MPI adapters can be installed in a bigger distance with the MPI extension cable.
The cable also carries the power supply for the MPI adapter.

Ordering Data	
	Order-No.
MPI-Accessory DIN rail adapter, short (for SSW7, SSW7-TS, SSW7-USB, NETLink® PRO, NETLink® USB)	**700-751-HSH01**
DIN rail adapter, long (only for SSW7-TS with Modem + ISDN + GSM + NETLink® WLAN)	**700-751-HSH10**
Extension cable Extension cable MPI bus, 5 m	**700-751-6VK11**
Extension cable MPI bus, 10 m	**700-751-6VK21**
Extension cable MPI bus, special lengths	**700-751-6SO11**

SSW200, PPI-cable
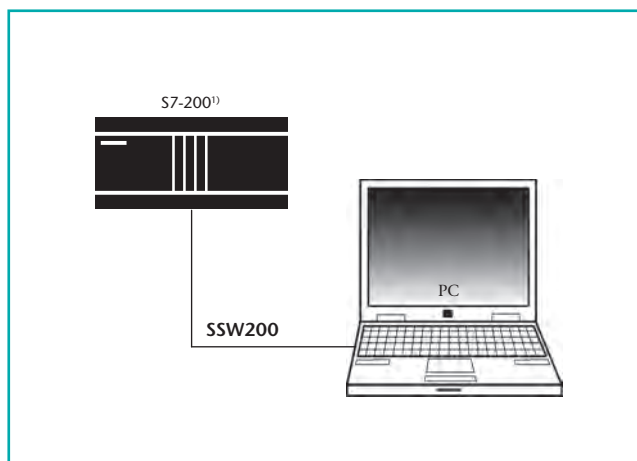
With the SSW200 it is possible to connect a PC with suitable programming software to a S7-200[1] via any standard COM port. You can set the transmission rate to match your PC with a selector switch.

Ordering Data	
	Order-No.
SSW200, PPI-cable for connecting PC to S7-200[1], 3 m	**700-751-2VK11**

1) S7-200 is a registered trademark of Siemens AG

Technical Data	
PPI interface Type	**RS485**
Transmission rate (depending on switch position)	1200, 2400, 9600, 19200, 38400 kbps
Connectors	SUB-D, 9-way
Communication interface Type	RS232
Transmission mode	serial asynchron
Transmission rate (depending on switch position)	1200, 2400, 9600, 19200, 38400 kbps
Female connector	SUB-D, 9-way