

# S5/S7 Interfaces



## IBH Link S7++

If a S7-200®, S7-300® or S7-400® has to be connected with a PC via Ethernet, the normal way is to take a CP/Communication processor. IBHsofttec has a more flexible solution: **IBH Link S7++**. If you want to connect your PC via Ethernet just take the **IBH Link S7++**. The **IBH Link S7++** is a very small gateway integrated in a Sub D connector. The **IBH Link S7++** replaces the well known **IBH Link S7** and **IBH Link S7 CrossOver**.

Additional features:

- 16 PC-connections at the same time
- 32 MPI®/DP-connections at the same time
- Automatic Baudrate-detection
- RFC1006
- RJ45-Plug with autodetect integrated
- PG(PU)-Connector
- Diagnostic LEDs
- Power supply from the MPI®/DP interface
- Connection also to passive nodes with power supply via integrated 24V connector

## IBH Link S7 Plus



If a S7-200®, S7-300® or S7-400® has to be connected with a PC via Ethernet, the normal way is to take a CP/Communication processor. IBHsofttec has a more flexible solution: **IBH Link S7 Plus**. If you want to connect your PC via Ethernet just take the **IBH Link S7 Plus**. The **IBH Link S7 Plus** is a small gateway. The **IBH Link S7 Plus** offers the same features like the well known **IBH Link S7**.

Additional features:

- 6 PC-connections at the same time
- PROFIBUS MPI®-Plug with PG(PU)-Connector
- RJ45-Plug integrated
- Connection also to passive nodes
- rail mount
- Diagnostic LEDs
- Galvanic separation

## USB-S7-Adaptor MPI®, DP, PPI

The USB-S7-Adaptor MPI®, DP, PPI is an USB interface to the MPI®/PPI or DP-Bus converter for programming software or HMI. The USB-S7-Adaptor MPI®, DP, PPI has a 1.2m long MPI® connecting cable, which can be directly plugged into the programming socket of the CPU or to any other node in the MPI® network. The LCD Display shows the



transmission rate and MPI®/DP address.

The housing of the USB-S7-Adaptor MPI®, DP, PPI contains a type "B" USB socket. The Adaptor can be connected to the PC via the USB cable supplied. The USB-S7-Adaptor MPI® is powered from the PC. The USB-S7-Adaptor MPI®, DP, PPI can be used at any node in the MPI® bus. A driver for Windows® 98/2000/XP is supplied.

## IBH Link S5

As an alternative solution, IBHsofttec has recently introduced the **IBH Link S5** for connecting a S5 PLC with a PC. The **IBH Link S5** is compact and robust Ethernet-converter within a 15-pin Sub-D-housing for a connection via a switch, a hub or even directly to a PC with a common network adaptor. The used protocol is the standard TCP/IP protocol. In this way, the user can benefit from all the advantages of Ethernet like remote maintenance via a standard router or VPN-connections (Virtual Private Network). Likewise, a direct connection to the Internet is possible. All required drivers for the STEP® 5 software from Siemens and for **S5 for Windows®** are included.



## IBH USB-S5-Adaptor

Interfaces the PC USB Port with the 15 pin AS511 Interface port of the PLC. The 15 pin connector housing is made from solid metal and contains the complete electronics. The **IBH USB-S5-Adaptor** takes its power supply from the USB port of the PC. It is an active cable, no power supply from the PLCs programming port is required. A Constant Current adapter is not needed for this reason. The **IBH USB-S5-Adaptor** can be used with **S5 for Windows®**, the **IBH OPC Server** and STEP®5 (Drivers for Windows® 2000, XP and Vista are included).



## S5 Interfaces



### **IBH USB-S5-Adaptor**

Interfaces the PC USB Port with the 15 pin AS511 Interface port of the PLC. The 15 pin connector housing is made from solid metal and contains the complete electronics. The **IBH USB-S5-Adaptor** takes it's power supply from the USB port of the PC.

It is an active cable, no power supply from the PLCs programming port is required. A Constant Current adaptor is not needed for this reason. The **IBH USB-S5-Adaptor** can be used with **S5 for Windows®**, the **IBH OPC Server** and STEP®5 (Drivers for Windows 2000 and XP are included )



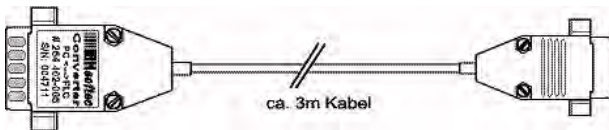
### **PC-S5-Current Loop Converter**

The SMD electronics are located in a solid metal 15 pin SubD connector shell. The pin assignment fits the following SIMATIC® PLCs: U90, U95, U100, U101, U115, U135, and U155. The PLC must be active and needs to supply the the loop current (2 x 20mA). The 9 pin SubD connector is plugged into the serial port (COM1 COM4) of the PC.

# S5-Online Connections (PLC↔PC)

## Current Loop Converter

The SMD electronics are located in the 15 pin Sub.-D connector shell. The pin assignment is compatible with the S5 PLC's (U90, U95, U100, U101, U115, U135, U155). The PLC must be active and must supply the loop current (2 x 20mA). The 9 pin Sub.-D connector is plugged into the



serial port (COM1 - COM4) of the PC.

## Extension Cable

The S5 for Windows® Current Loop Converter optically isolates the PLC from the PC. Cable length of several hundred meters (thousand feet) are possible (on the current loop side). The extension cable provides an extension between the PLC and the Current Loop Converter. The cable provides all the necessary lines and jumpers.

## Constant Current Adapter

Devices that do not supply the loop current (2 x 20mA) need the Constant Current Adapter for connection. Two constant current (20mA) sources are located in the 15 pin Sub.-D connector shell to supply the loop current. The adapter is delivered with a AC / DC adapter. The pin assignment matches the pin assignment of the S5 for Windows® Current Loop Converter.

**Type 1:** Pin assignment for Simatic® U90, U95, U100, U101, U115, U135, and U155. 15pin Sub.D female connector with the pin assignment A...9, B...2, C...6, D...7, E...1, F...8).

**Type 2:** Pin assignment for the CNC 800 series. 25pin Sub.-D male connector with the pin assignment A...13, B...14, C...10, D...19, E...1, F...1.

**Type 3:** Pin assignment for the PLC U150. 25pin Sub.D female connector with the pin assignment A...21, B...20, C...19, D...18, E/F... shell.

**Type 4:** The pin assignment is compatible with the 20mA (TTY) serial connector of the programming devices (connector PG S5): PG 670, PG 675, PG 685, PG 635 and PG 750. 25-pin Sub.D female connector with the pin assignment A...22, B...10, C...8, D...21, E/F...25.

**Type X:** Pin assignment on customers request.

## PC USB Current Loop Converter

Couples the PC USB Port with the 15 pole X4/X5 interface port of the plc 15pin plug housings are



made of solid metal Complete electronics in the plug housing Supply of the cable complete from the PC Is „active“ in relation of the plc Is working with standard S5-Software (Drivers for Win2000 and

XP included )

## Constant Current Adapter



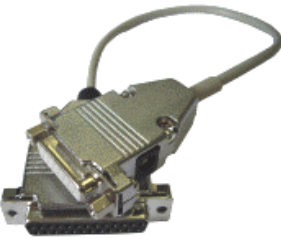
### **Type 1 (Ref 2042)**

Pin assignment for Simatic® U90, U95, U100, U101, U115, U135, and U155. 15pin Sub.D female connector with the pin assignment A...9, B...2, C...6, D...7, E...1, F...8).



### **Type 2 (Ref 2044)**

Pin assignment for the CNC 800 series. 25pin Sub.D male connector with the pin assignment A...13, B...14, C...10, D...19, E...1, F...1.



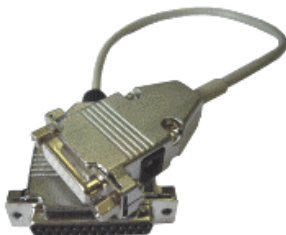
### **Type 3 (Ref 2046)**

Pin assignment for the PLC U150. 25pin Sub.D female connector with the pin assignment A...21, B...20, C...19, D...18, E/F... shell.



### **Type 4 (Ref 2048)**

The pin assignment is compatible with the 20mA (TTY) serial connector of the programming devices (connector PG S5): PG 670, PG 675, PG 685, PG 635 and PG 750. 25pin Sub.D female connector with the pin assignment A...22, B...10, C...8, D...21, E/F...25.



### **Type X (Ref 2040)**

Pin assignment on customers request.

## S5 INTERFACES



### USB-S5-Current Loop Converter (Ref 20212)

Interfaces the PC USB Port with the 15 pin AS511 Interface port of the PLC. The 15 pin connector housing is made from solid metal and contains the complete electronics. The **USB-S5 Current Loop Converter** takes its power supply from the USB port of the PC. It is an active cable, no power supply from the PLCs programming port is required. A Constant Current adapter is not needed for this reason. The **USB-S5 Current Loop Converter** can be used with [S5 for Windows®](#), the IBH OPC Server and Step@5 (Drivers for Windows 98(SE), 2000 and XP are included )



### PC-S5-Current Loop Converter (Ref 2020)

The SMD electronics are located in a solid metal 15 pin SubD connector shell. The pin assignment fits the following Simatic® PLC's: U90, U95, U100, U101, U115, U135, and U155. The PLC must be active and needs to supply the the loop current (2 x 20mA). The 9 pin SubD connector is plugged into the serial port (COM1 COM4) of the PC.

# S7-Online Connection (PLC↔PC)

## S7-PC-MPI-Adapter SSW7

A Hi-Speed Adapter to transfer data between S7 for Windows® and the Siemens S7-300® and S7-400® is available. This adapter converts the serial port signals into the MPI protocol to provide all the on-line functions available with S7 for Windows®. The required power normally is supplied by the



S7-300® or S7-400® PLC. If the MPI Bus does not supply enough power, an external power supply (15 - 30VDC) may be connected to the SSW7 Adapter. The SSW7 Adapter provides a connector (9 pin Sub-D) to attach the adapter via a standard Null-Modem cable (delivered with the SSW7) with the PC Adapter.

## PC USB S7 Adapter

A Hi-Speed Adapter to transfer data between S7



for Windows® or Step7® and the Siemens S7-300® and S7-400® is available. The SSW7-USB permits conversion from a USB interface to the MPI bus for programming software or visualization.

The SSW7 has a 1.2m 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 Windows NT / 98/2000/XP is supplied.

## Multiplexer for MPI and PROFIBUS

The MPI/Profibus multiplexer permits connection of up to 3 devices to one MPI or Profibus network. The MPI/Profibus multiplexer has a 1.2 m long connecting cable that can be plugged directly into the CPU socket of the PLC, but also at any position in a MPI or Profibus network. The housing of the MPI/Profibus multiplexers are located in three



9-way Sub D sockets. Two sockets (“PG” and “OP”) are located on the top of the MPI/Profibus multiplexer for connecting devices. The 3rd socket (“BUS”) on the front can be used to extend the MPI/Profibus network, or also to connect a third device. The “PG” socket is the only socket that has the full MPI pin assignment. That makes it possible to use “direct operation” on this socket via an MPI adapter (“SSW 7” or “PC adapter”) with programming software. This pin assignment is not relevant for operation of Profibus devices. The “BUS ON/OFF” switch switches on terminating resistors in the MPI/Profibus multiplexer. It also switches off the “BUS” socket. This permits operation of the MPI/Profibus multiplexer at the end of the network or segment-by-segment start-up of a network. The MPI/Profibus multiplexer is powered via the connection line of the CPU. If the terminal does not provide 24 V, it is possible to draw the 24 V from an external source. The 24 V connector for this purpose (green connector) is polarized.

## S7 INTERFACES



### USB-S7 Adaptor MPI, DP, PPI (Ref 20218)

The **USB-S7 Adaptor MPI, DP, PPI** is an USB interface to the MPI/PPI or DP-Bus converter for programming software or HMI. The **USB-S7 Adaptor MPI, DP, PPI** has a 1.2m long MPI connecting cable, which can be directly plugged into the programming socket of the CPU or at any other node in the MPI network. The LCD Display shows the transmission rate and MPI/ DP address. The housing of the **USB-S7 Adaptor MPI, DP, PPI** contains a type „B“ USB socket. The Adaptor can be connected to the PC via the USB cable supplied. The **USB-S7 Adaptor MPI** is powered from the PC. The **USB-S7 Adaptor ) MPI, DP, PPI** can be used at any node in the MPI bus. A driver for Windows 98/2000/XP is supplied.



### USB-S7 Adaptor (Siemens) MPI, DP, PPI (Ref 20216)

The **USB-S7 Adaptor (Siemens) MPI, DP, PPI** is an USB interface to the MPI/PPI or DP-Bus converter for programming software or HMI. The **USB-S7 Adaptor (Siemens) MPI, DP, PPI** has a 1.2m long MPI connecting cable, which can be directly plugged into the programming socket of the CPU or at any other node in the MPI network. The housing of the **USB-S7 Adaptor (Siemens) MPI, DP, PPI** contains a type „B“ USB socket. The Adaptor can be connected to the PC via the USB cable supplied. The required power supply is normally taken from the S7-300® or S7-400® PLCs programming port. The **USB-S7 Adaptor (Siemens) MPI, DP, PPI** can be used at any node in the MPI bus. A driver for Windows 98/2000/XP is supplied.



### PC-S7 Adaptor (Siemens) serial MPI, DP (Ref 2023)

This adaptor converts the serial port signals into the MPI protocol to provide all online functions available with [S7 for Windows®](#) or Step®7. The required power supply is normally taken from the S7-300® or S7-400® PLCs programming port. The PC-S7 Adaptor (Siemens) serial MPI, DP has a 9 pin Sub-D connector to connect it to the PC via a standard Zero-Modem cable.

## S7 INTERFACES



### USB-S7 Adaptor MPI (Ref 20214)

The **USB-S7 Adaptor MPI** is a USB interface to the MPI bus converter for programming software or HMI. The **USB-S7 Adaptor MPI** has a 1.2m long MPI connecting cable, which can be directly plugged into the programming socket of the CPU or at any other node in the MPI network. The housing of the **USB-S7 Adaptor MPI** contains a type „B“ USB socket. The **USB-S7 Adaptor MPI** can be connected to the PC via the USB cable supplied. USB-S7 Adaptor MPI is powered from the PC. The **USB-S7 Adaptor MPI** can be used at any node in the MPI bus. A driver for Windows 98/2000/XP is supplied.



### PC-Adaptor serial MPI (2024)

This adaptor converts the serial port signals into the MPI protocol to provide all online functions available with ***S7 for Windows®*** or Step®7. The required power supply is normally taken from the S7-300® or S7-400® PLCs programming port. If the MPI Bus does not supply enough power, an external power supply (15 - 30VDC) may be connected to the PC-Adaptor serial MPI. The PC-S7 Adaptor serial MPI, DP has a 9 pin Sub-D connector to connect it to the PC via a standard Zero-Modem cable (delivered with the SSW7).

## Accessories



### AC/DC Adaptor 24 V for *IBH Link S7* (Ref 20279)

If no 24V is supplied, the **AC/DC Adaptor** delivers the 24 V.



### RJ-45 Crossover adaptor (Ref 2051)

For direct connection of the ***IBH Link S7*** to the network card of the PC.  
For connection of the ***IBH Link S7 Crossover*** to a switch or hub.



### RJ45-female to female connector (Ref 2053)

For extending the RJ45 line of the ***IBH Link S5***, the ***IBH Link S7***, the ***IBH Link S7 Crossover*** or the ***IBH Link S7 Plus***