

PSI line

Bluetooth interface converter For RS-232, RS-422, RS-485



Wireless data transfer is particularly suitable for flexible and temporary data connections to changing communication modules or for addressing moving or mobile system components.

The international, license-free wireless standard Bluetooth™ is suitable for applications in industrial environments. Depending on the system concept, it is possible to realize radio connections across distances of up to 150 m or more. This radio standard fulfills the requirements for interference-free data transfer via the so-called frequency hopping system (FHSS) in the 2.4 GHz ISM band.

The **PSI-WL Bluetooth interface converters** are used for converting the serial interfaces RS-232, RS-422, RS-485 or USB. With the Bluetooth converters, point-to-point and multipoint connections can be realized. Thus, they function as an economical, alternative, flexible cable substitute or as access point for Bluetooth-capable end devices for handling programming, parameterizing or diagnosis tasks via notebook.

The high demands on transmission security with relation to immunity to interference or manipulation will be ensured with the frequency hopping, password protection, data encryption, favorites lists etc.

The Bluetooth converter **PSI-WL-RS232-RS485/BT** is suitable for universal application and is the preferred solution in the control cabinet, using an external antenna, and is characterized by the following performance characteristics:

Wireless transmission of serial interfaces up to 150 m or more.

Easy installation

- Mounting on EN DIN rail
- Supply of 24 V DC or AC
- Operation on all controllers without driver installation
- Integrated Bluetooth path diagnosis in the form of a dynamic bar chart display

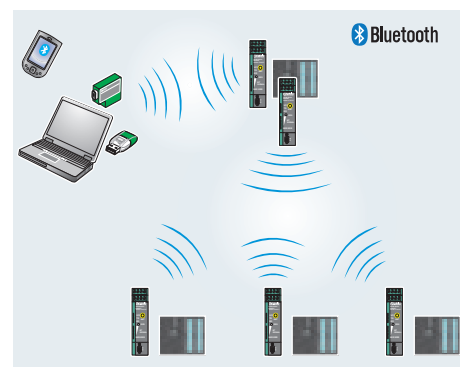
Flexible parameterization/application options

- Can be used universally for RS-232, RS-422 and RS-485-2-wired interfaces up to 187.5 kbps
- Supports all popular 10/11-bit UART data formats
- 3964R-compatible
- Scalable transmission power (-28...20 dBm) for specific, spatial limits of the radio cell,

High transmission reliability

- 128 bit data encoding
 - Password protection
 - Fixed and invisible device pairing
- The PSI line component can be used universally as a converter for adapting interfaces together with corresponding Bluetooth adapters or for connecting serial devices to RS-485 networks. The device is particularly suitable for wireless access to controllers for programming or diagnostics as well as wireless Fieldbus communication e.g. Modbus, Profibus, etc.

In order to accelerate startup of wireless PROFIBUS paths or program access to Siemens MPI interfaces, pre-configured sets such as **PSI-WL-PROFIB/BT-SET** or **PSI-WL-MPI/BT-SET** have been made available. Bluetooth converters have been pre-configured with maximum Bluetooth security for each corresponding application.



Description

PSI Bluetooth converter, MCX connection for external antenna.
Scope of supply: PSI Bluetooth converter, CD with configuration software and user manual

PSI Bluetooth PROFIBUS-SET, scope of supply: 2x PSI-Bluetooth converter, 2x OMNI omnidirectional antenna.

PSI Bluetooth MPI-SET, scope of supply: 1x PSI-Bluetooth converter, 1x OMNI omnidirectional antenna.
1x PSI-MPI/RS232 adapter, 1x RS232 cable

RS-232 SUB-D cable, length: 2 m
- 9-pos. socket on 9-pos. socket
- 9-pos. socket on 25-pos. socket

OMNI omnidirectional antenna
PANEL directional wireless antenna (without cable)

Antenna adapter cable

System power supply, primary switched-mode

DIN rail connector T-BUS

Technical data

Supply
Supply voltage

Supply voltage

Supply voltage

Nominal current consumption

Serial port

Interfaces

Connection method

Data format/coding

Data flow control/protocols

Transmission speed

Termination resistor

Wireless interface

Interfaces

Antenna connection

Transmission power

Receiver sensitivity

Frequencies

Range depending on spatial conditions

Bluetooth Multidrop master / slave

General data

Ambient temperature (operation)

Electromagnetic compatibility

Dimensions

W / H / D



PSI-WL-RS232-RS485/BT

PSI Bluetooth converter for DIN rail mounting, for wireless transmission of RS-232, RS-422 and RS-485 interfaces



PSI-WL-PROFIB/BT-SET

PSI Bluetooth PROFIBUS-SET, pre-configured to 187.5 kbps for an invisible, password-protected PROFIBUS point-to-point connection



PSI-WL-MPI/BT-SET

PSI Bluetooth MPI-SET, pre-configured to 38.4 kbps for password-protected programming access to a Siemens MPI interface

Housing width 22.5



Type	Order No.	Pcs. / Pkt.
PSI-WL-RS232-RS485/BT	2708517	1
PSM-KA9SUB9/BB/2METER	2799474	1
PSM-KA 9 SUB 25/BB/2METER	2761059	1
RAD-ISM-2400-ANT-OMNI-2-1	2867461	1
RAD-ISM-2400-ANT-PAN- 8-0	2867610	1
RAD-PIG-EF316-MCX-SMA	2867678	1
MINI-SYS-PS-100-240AC/24DC/1.5	2866983	1
ME 22,5 TBUS 1,5/ 5-ST-3,81 GN	2707437	50

10 V DC ... 30 V DC (via pluggable COMBICON screw terminal block)
 19 V AC ... 29 V AC (via pluggable COMBICON screw terminal block)
 24 V DC $\pm 20\%$ (as an alternative or redundant, via backplane bus contact and system current supply)

40 mA (for 24 V DC)

RS-232 RS-422, RS-485 2-wire
 D-SUB-9 connector
 Serial asynchronous UART/NRZ, 7/8 Data, 1/2 Stop, 1 Parity, 10/11 bits character length
 Software handshake, Xon/Xoff, or hardware handshake RTS/CTS, 3964 compatible
 300, 1200, 2400, 4800, 7200, 9600, 19200, 31250, 38400, 57600, 75000, 93750, 115200, 136000, 187500 bps

390 Ω - 150 Ω - 390 Ω (can be connected)

Specification 2.0, class 1
 External
 -28 dBm to 20 dBm (adjustable)
 -83.00 dBm
 2.402 GHz ... 2.48 GHz (ISM bandwidth)
 20 dBm (100 mW) = 80 m to 150 m
 1/7

-20°C ... 60°C
 Conformance with R&TTE directive 1999/5/EEC
 22.5 mm / 114.5 mm / 99 mm

Housing width 22.5

Type	Order No.	Pcs. / Pkt.
PSI-WL-PROFIB/BT-SET	2313313	1

10 V DC ... 30 V DC (via pluggable COMBICON screw terminal block)
 19 V AC ... 29 V AC (via pluggable COMBICON screw terminal block)
 24 V DC $\pm 20\%$ (as an alternative or redundant, via backplane bus contact and system current supply)

40 mA (for 24 V DC)

RS-485 2-wire
 COMBICON screw terminal block
 8 Data, 1 Stop, 1 Parity, 11 bit character length
 -
 187500 bps

390 Ω - 150 Ω - 390 Ω (can be connected)

Specification 2.0, class 1
 External
 20 dBm
 -83.00 dBm
 2.402 GHz ... 2.48 GHz (ISM bandwidth)
 20 dBm (100 mW) = 80 m to 150 m
 -

-20°C ... 60°C
 Conformance with R&TTE directive 1999/5/EEC
 22.5 mm / 114.5 mm / 99 mm

Housing width 22.5

Type	Order No.	Pcs. / Pkt.
PSI-WL-MPI/BT-SET	2313562	1

10 V DC ... 30 V DC (via pluggable COMBICON screw terminal block)
 19 V AC ... 29 V AC (via pluggable COMBICON screw terminal block)
 24 V DC $\pm 20\%$ (as an alternative or redundant, via backplane bus contact and system current supply)

40 mA (for 24 V DC)

RS-232
 D-SUB-9 connector
 8 Data, 1 Stop, 1 Parity, 11 bit character length
 Hardware handshake RTS/CTS
 38400 Bit/s

-

Specification 2.0, class 1
 External
 20 dBm
 -83.00 dBm
 2.402 GHz ... 2.48 GHz (ISM bandwidth)
 20 dBm (100 mW) = 80 m to 150 m
 -

-20°C ... 60°C
 Conformance with R&TTE directive 1999/5/EEC
 22.5 mm / 114.5 mm / 99 mm

INTERFACE Serial

Wireless transmission

PSI line

Bluetooth interface converter For RS-232, RS-422, RS-485

Thanks to their compact design and the integrated antenna, the PSI Bluetooth adapters **PSI-WL-PLUG-RS232/BT** and **PSI-WL-PLUG-USB/BT** are preferably used for mobile, temporary maintenance and diagnostics connections and are thus a fast and easy addition to the PSI Bluetooth converter.



PSI-WL-PLUG-RS232/BT

PSI Bluetooth RS-232 adapter for direct assembly on 9-pos. serial ports and wireless transmission of RS-232 interfaces



PSI-WL-PLUG-USB/BT

PSI Bluetooth USB adapter for direct assembly on USB type A ports and wireless transmission from USB interfaces

Description
PSI Bluetooth RS-232 adapter , internal antenna. Scope of supply: PSI Bluetooth RS-232 adapter, CD with configuration software and user manual
PSI Bluetooth USB adapter , internal antenna. Scope of supply: PSI-Bluetooth-USB adapter, CD with driver, configuration software and manual
Plug-in power supply unit , 230 V AC/5 V DC with 1.5 m DC cable
1.5 m separate DC cable , to supply the PSI-Bluetooth RS-232 adapter from an external 5 V DC source
Adapter set with 0.5 m cable , to supply the PSI Bluetooth RS-232 adapter from a USB or PS2 interface

Technical data

Supply
Supply voltage
Nominal current consumption
Serial port
Interfaces
Connection method
Data format/coding
Data flow control/protocols
Transmission speed
Wireless interface
Interfaces
Antenna connection
Transmission power
Receiver sensitivity
Frequencies
Range depending on spatial conditions
General data
Ambient temperature (operation)
Electromagnetic compatibility
Dimensions

Housing width 52

Type	Order No.	Pcs. / Pkt.
PSI-WL-PLUG-RS232/BT	2708494	1
IBS ECO-LINK NT 230AC/5DC	2746472	1
PSM-VLTG/1,5METER	2787460	1
PSM-VLTG-USB/PS2/0,5	2708025	1

4 V DC ... 6 V DC (via 3-pos. equipment plug, using plug-in power supply unit or adapter set) 70 mA (for 5 V DC)
RS-232 D-SUB-9 female connector Serial asynchronous UART/NRZ, 7/8 Data, 1/2 Stop, 1 Parity, 10/11 bits character length Software handshake, Xon/Xoff, or hardware handshake RTS/CTS, 3964 compatible 300, 1200, 2400, 4800, 7200, 9600, 19200, 31250, 38400, 57600, 75000, 93750, 115200 bps
Specification 1.1, class 2 Internal 0 dBm -75.00 dBm 2.402 GHz ... 2.48 GHz (ISM bandwidth) 0 dBm (1 mW) = 10 m to 30 m
-20°C ... 60°C Conformance with R&TTE directive 1999/5/EEC 52 mm / 16 mm / 60.5 mm

Housing width 18

Type	Order No.	Pcs. / Pkt.
PSI-WL-PLUG-USB/BT	2313083	1

5 V DC (Directly via the USB interface) 100 mA (for 5 V DC)
USB 2.0 USB type A, male connector Synchronous / asynchronous Transparent to protocol incl. 3964 R protocol Up to 2.1 Mbps
Specification 2.0, class 1 Internal 20 dBm -80.00 dBm 2.402 GHz ... 2.48 GHz (ISM bandwidth) 20 dBm (100 mW) = 80 m to 150 m
0°C ... 70°C Conformance with R&TTE directive 1999/5/EEC 18 mm / 8 mm / 58 mm