



 **Bluetooth**

INTERFACE

Wireless  
data communication  
PSI Bluetooth™ converter

## Serial Wireless Bluetooth™ converter for RS 232, RS 422 and RS 485 2-wire

Make use of the benefits of a fast and simple wireless data connection to communicate conveniently and flexibly with communication modules and mobile system components. With the Bluetooth™ wireless standard, communication is possible over a distance of up to 150 m. Its high transmission reliability following the frequency hopping method (FHSS) in the 2.4 GHz ISM band makes Bluetooth™ suitable for worldwide use in industrial applications.

The **PSI-WL** Bluetooth radios are employed for sending the serial interfaces RS 232, RS 422 and RS 485 where they serve as serial cable substitutes in point-to-point or multipoint connections. Additionally, each **PSI-WL** Bluetooth radio can be used as an access point for Bluetooth-capable terminal devices to execute operating statuses as well as programming or remote diagnostics via notebook or PDA. Access to Bluetooth enabled devices is limited with password protection, applied device lists or fixed assignment of the devices to each other.

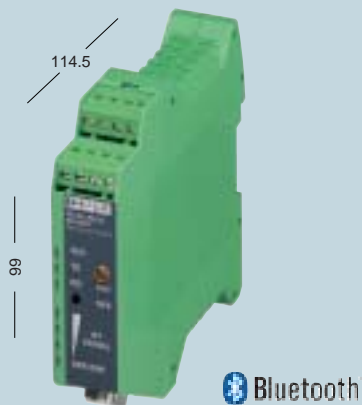
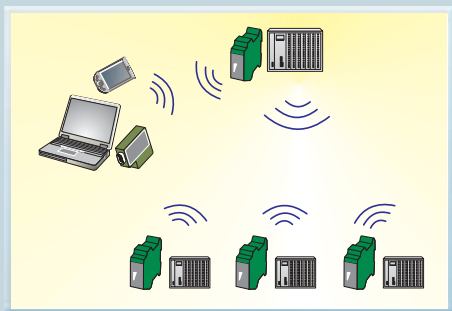
The **PSI-WL-RS232-RS485/BT** Din Mount version is mainly used in the control cabinet with an external antenna.

An LED bar graph indicates signal strength during setup of the radio link allowing ideal positioning of the external antenna. The transmit power can also be adjusted via programming software in order to limit the area of radio coverage to meet individual requirements. Features are:

- Supply with 24V DC or AC
- Serial transmission speed of up to 187.5 kbps
- RS 232, RS 422, RS 485 protocols
- Supports all common 10/11 bit UART data formats
- 3964R-compatible
- Range up to 150 m
- Restricted Bluetooth access via password, fixed device pairing or device access list
- Adjustable transmit power (-28...20 dBm)
- Built in LED bar graph indicates signal strength.



The Bluetooth plug-in adapter **PSI-WL-PLUG...** is already fitted with an integrated antenna. It is simply plugged into a 9-pos. RS 232 port and supplied with 5V DC via a plug-in power supply unit or an adapter cable. The transmit power is fixed at 0 dBm, and this allows ranges of up to approximately 30 m. This adapter is the preferred choice for temporary maintenance and diagnostics connections.



## PSI-WL-RS 232-RS 485/BT

Bluetooth converter for DIN rail mounting



## PSI-WL-PLUG-RS 232/BT

RS 232 Bluetooth plug-in adapter

<b>Description</b>	
<p><b>Bluetooth converter</b>, for wireless transmission of RS 232, RS 422 and RS 485 interfaces, MCX connection for external antenna, supply 24 V AC/DC</p> <p><b>RS 232 Bluetooth adapter</b>, for direct mounting on 9-pos. serial ports, internal antenna, supply 5 V DC via separate plug-in power supply unit</p> <p><b>Plug-in power supply unit</b>, 230 V AC/5 V DC with 1.5 m DC cable to supply an RS 232 Bluetooth adapter</p> <p><b>1.5 m separate DC cable</b>, to supply an RS 232 Bluetooth adapter from an external 5 V DC source</p> <p><b>RS 232 cable</b>, 2 m 9-pos. SUB-D female conn. on a 9-pos SUB-D female connector 9-pos. SUB-D female conn. on a 25-pos SUB-D female connector</p> <p><b>Omnidirectional antenna</b>, 2 dBi, 1/4 wave, with fixing bracket, 1.5 m cable and MCX connector</p> <p><b>Panel directional antenna</b>, 8 dBi, with fixing bracket, connection SMA, without antenna cable</p> <p><b>Antenna cable</b>, for directional antenna, 1 m, 1.5 dB, with connection MCX/SMA</p>	
<b>Technical data</b>	
Supply voltage / connection	
Nominal current consumption	
<b>Serial interface</b>	
Connection	
Data format/coding	
Data flow control	
Transmission rates	
Terminating resistance	
<b>Bluetooth interface</b>	
Antenna	
Connection	
Transmit power	
Receiver sensitivity	
Frequency	
Transmission methods	
Range depending on spatial conditions	
Bluetooth Multidrop Master / Slave	
<b>General data</b>	
Electrical isolation	
Test voltage	
Housing material	
Ambient temperature range	
Electromagnetic compatibility	
Certificates	

Housing width 22.5			
Type	Order No.	Pcs. Pkt.	
<b>PSI-WL-RS 232-RS 485/BT</b>	<b>27 08 51 7</b>	<b>1</b>	
<b>PSM-KA-9SUB9/BB/2METER</b>	<b>27 99 47 4</b>	<b>1</b>	
<b>PSM-KA-9SUB25/BB/2METER</b>	<b>27 61 05 9</b>	<b>1</b>	
<b>RAD-ISM-2400-ANT-OMNI-2-1</b>	<b>28 67 46 1</b>	<b>1</b>	
<b>RAD-ISM-2400-ANT-PAN-8-0 <sup>1)</sup></b>	<b>28 67 61 0</b>	<b>1</b>	
<b>RAD-PIG-EF316-MCX-SMA <sup>1)</sup></b>	<b>28 67 67 8</b>	<b>1</b>	
<b>for DIN rail mounting</b>			
10-30 V DC, 24 V AC $\pm$ 20% using pluggable screw terminal blocks			
Approx. 60 mA at 24 V DC			
RS 232 / RS 422 / RS 485 2-wire, selectable			
SUB-D, 9-pos. male connector (RS 232) DCE assignment for 1:1 cable / pluggable screw terminal block COMBICON (RS 422, RS-485)			
Serial asynchronous UART/NRZ 10/11 bit			
Software handshake, none, hardware handshake RTS/CTS, 3964 R compatible			
0.3, 1.2, 2.4, 4.8, 7.2, 9.6, 19.2, 31.25, 38.4, 57.6, 75, 93.75, 115.2, 136, 187.5 kbps			
390-150-390 Ohm, selectable			
Specification 1.1, class 1			
External			
MCX			
-28 to 20 dBm can be set			
- 80 dBm			
ISM band, 2.400 GHz to 2.4835 GHz			
Frequency hopping 1.6 kHz (FHSS)			
0 dBm (1 mW) = 10 m to 30 m			
10 dBm (10 mW) = 40 m to 70 m			
20 dBm (100 mW) = 80 m to 150 m			
1/7			
Serial interface // Supply // Functional earth ground			
1.5 kV <sub>rms</sub> , 50 Hz, 1 min			
PA 6.6 FR			
-20°C to +60°C			
CE compliance with EMC directive 99/05/EC			
FCC/CFR 47, part 15 for USA			
RSS210 for Canada			
ETSI EN 300 328 for Europe			

Housing width 52			
Type	Order No.	Pcs. Pkt.	
<b>PSI-WL-PLUG-RS 232/BT</b>	<b>27 08 49 4</b>	<b>1</b>	
<b>IBS ECO LINK NT 230VAC/5VDC</b>	<b>27 46 47 2</b>	<b>1</b>	
<b>PSM-VLTG/1,5 METER</b>	<b>27 87 46 0</b>	<b>1</b>	
<b>Plug-in adapter</b>			
4-6 V DC via plug-in power supply unit, PS2 or USB port			
Approx. 100 mA at 5 V DC			
RS 232			
SUB-D 9-pos. female connector			
Serial asynchronous UART/NRZ 10/11 bit			
Software handshake, none, hardware handshake RTS/CTS, 3964 R compatible			
0.3, 1.2, 2.4, 4.8, 7.2, 9.6, 19.2, 31.25, 38.4, 57.6, 75, 93.75, 115.2, 136, 187.5 kbps			
-			
Specification 1.1, class 2			
internal			
-			
0 dBm			
- 80 dBm			
ISM band, 2.400 GHz to 2.4835 GHz			
Frequency hopping 1.6 kHz (FHSS)			
0 dBm (1 mW) = 10 m to 30 m			
1/3			
-			
-			
PBT FR			
-20°C to +60°C			
CE compliance with EMC directive 99/05/EC			
FCC/CFR 47, part 15 for USA			
RSS210 for Canada			
ETSI EN 300 328 for Europe			

Bluetooth™ is a word mark of Bluetooth-SIG Inc.

<sup>1)</sup> not available in the USA

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