

# Bluetooth converter - PSI-WL-RS232-RS485/BT/HL - 2313795

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Bluetooth convertor, wireless transmission: RS-232/RS-422/RS-485 2-wire, mounting on EN DIN rails, MCX connection for external antenna, integrated path diagnostics: bar graph, UL-HazLoc approval

## Product Description


The products are offered exclusively for export outside the EU and the European Economic Area.

## Your advantages

- ✓ Local configuration via USB interface without separate power supply unit
- ✓ Multipoint with up to seven slaves
- ✓ Suitable for worldwide use thanks to adjustable transmission power (-28 ... 14 dBm)
- ✓ Secure and tamper-proof data transmission thanks to password protection, encryption, plus fixed and invisible device pairing
- ✓ Wireless path diagnostics using integrated bar graphs and 2 digital outputs
- ✓ Coexistence with other wireless systems due to the adaptive frequency hopping (AFH) method
- ✓ Installation of parallel wireless paths by cross-wiring 24 V DC and RS-485
- ✓ Point-to-point
- ✓ Can be used for RS-232/RS-422/RS-485 2-wire interfaces up to 187.5 kbps
- ✓ Transceiver for distances of up to 150 m
- ✓ UL HazLoc approval



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 579827
GTIN	4046356579827

## Technical data

### Note

Trade restriction	The products are offered exclusively for export outside the EU and the European Economic Area.
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### Dimensions

Width	22.5 mm
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### Dimensions

Height	99 mm
Depth	116 mm

### Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)
Altitude	5000 m (For restrictions see manufacturer's declaration)
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

### General

Electrical isolation	VCC // Bluetooth, RS-232, RS-422, RS-485, USB
Test voltage data interface/power supply	1.5 kV AC (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with R&TTE directive 1999/5/EC
Noise emission	EN 55011
Net weight	196.6 g
Housing material	PA 6.6-FR
Color	green
MTBF	1153 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)) 262 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
MTTF	2115 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day)) 850 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day)) 346 Years (SN 29500 standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))
UL, USA/Canada	Class I, Zone 2, AEx nA IIC T6 Class I, Zone 2, Ex nA IIC T6 Gc X Class I, Div. 2, Groups A, B, C, D cULus listed UL 508
Wireless licences	Switzerland Turkey (The device may only be operated with Phoenix Contact antennas in accordance with the "Short Range Radio Devices (SRD) Regulations" Gazette No. 26464 dated March 16, 2007.) USA Belarus (Maximum transmission power of 25 mW (14 dBm) outside of buildings)

### Power supply

Nominal supply voltage	24 V DC ±20 % (as an alternative or redundant, via backplane bus contact and system current supply)
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## Technical data

### Power supply

Supply voltage range	10 V DC ... 30 V DC (via pluggable COMBICON screw terminal block)
	19 V AC ... 29 V AC (50/60 Hz)
Typical current consumption	100 mA (24 V DC)

### Serial interface

Interface 1	V.24 (RS-232) interface in acc. with ITU-T V.28, EIA/TIA-232, DIN 66259-1
Interface	RS-232
Connection method	D-SUB 9 plug
File format/coding	Serial asynchronous UART/NRZ, 7/8 data, 1/2 stop, 1 parity, 10/11-bit character length
Transmission length	≤ 15 m
Pin assignment	DCE (Data Communication Equipment)
Data flow control/protocols	Software handshake, Xon/Xoff, or hardware handshake RTS/CTS, 3964 compatible
Serial transmission speed	1.2; 2.4; 4.8; 7.2; 9.6; 19.2; 31.25; 38.4; 57.6; 75; 93.75; 115.2 kbps
Interface 2	RS-422 interface in acc. with ITU-T V.11, EIA/TIA-422, DIN 66348-1
Interface	RS-422
Connection method	Pluggable screw connection
Transmission length	≤ 1200 m
Termination resistor	390 Ω (configurable)
	180 Ω
	390 Ω
Serial transmission speed	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
Interface 3	RS-485 interface, in acc. with EIA/TIA-485, DIN 66259-4/RS-485 2-wire
Interface	RS-485 2-wire
Connection method	Pluggable screw connection
File format/coding	Serial asynchronous UART/NRZ, 7/8 data, 1/2 stop, 1 parity, 10/11-bit character length
Transmission length	≤ 1200 m
Termination resistor	390 Ω (configurable)
	180 Ω
	390 Ω
Data flow control/protocols	Automatic control
Serial transmission speed	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
Interface 4	USB 2.0
Interface	USB
Connection method	Mini-USB B, socket

### Wireless interface

Interface description	Bluetooth 2.1 + EDR
Frequency range	2.402 GHz ... 2.48 GHz (ISM bandwidth)

# Bluetooth converter - PSI-WL-RS232-RS485/BT/HL - 2313795

## Technical data

### Wireless interface

Transmission method	1.6 kHz (FHSS)
Channel distance	1 MHz
Transmit capacity, minimum	0 dBm
Transmit capacity, maximum	14 dBm (Outside of Europe, adjustable via software)
	10 dBm (Europe, can be set via software)
	10 dBm (Default setting, adjustable)
Minimum receiver sensitivity	-91 dBm
Antenna	External
Connection method	MCX socket
Bluetooth Multidrop master/slave	1/7
Country support	Switzerland
	Turkey (The device may only be operated with Phoenix Contact antennas in accordance with the "Short Range Radio Devices (SRD) Regulations" Gazette No. 26464 dated March 16, 2007.)
	USA
	Belarus (Maximum transmission power of 25 mW (14 dBm) outside of buildings)

### Digital outputs

Output name	Digital outputs
Number of outputs	2

### Standards and Regulations

Electromagnetic compatibility	Conformance with R&TTE directive 1999/5/EC
Type of test	Free fall in acc. with IEC 60068-2-32
Test result	1 m
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	5g, 10...150 Hz, 2.5 h, in XYZ direction
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	15g, 11 ms period, half-sine shock pulse
Noise emission	EN 55011
Noise immunity	EN 61000-6-2:2005
Free from substances that could impair the application of coating	according to P-VW 3.10.7 57 65 0 VW-AUDI-Seat central standard
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 3 GHz
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 1 kV
Standards/regulations	EN 55032
	EN 61000-4-6

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## Technical data

### Standards and Regulations

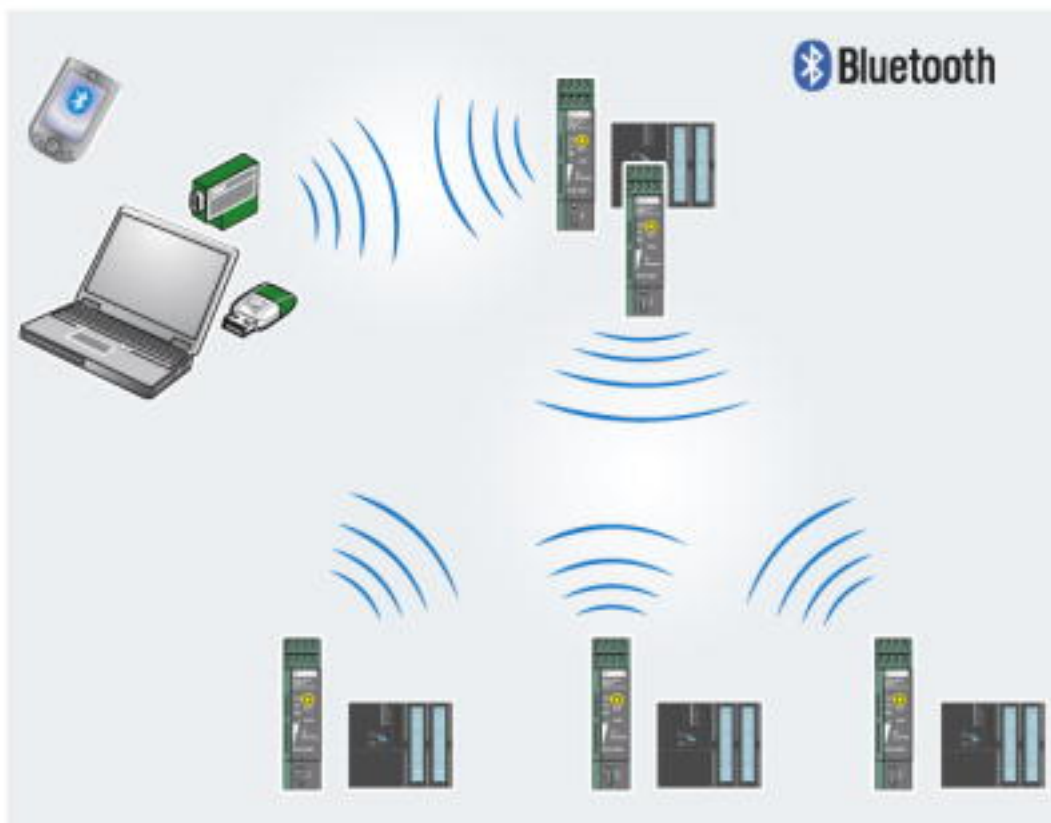
	FCC Part 15.247 / ISC RSS 210
UL, USA/Canada	Class I, Zone 2, AEx nA IIC T6
	Class I, Zone 2, Ex nA IIC T6 Gc X
	Class I, Div. 2, Groups A, B, C, D
	cULus listed UL 508
Noxious gas test	ISA-S71.04-1985 G3 Harsh Group A

### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

Functional drawing



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