

PSI-WL-RS232-RS485/BT/2DO - Bluetooth converter



2313805

<https://www.phoenixcontact.com/us/products/2313805>

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Bluetooth converter, 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 + two digital outputs

Product description

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

Your advantages

- Installation of parallel wireless paths by cross-wiring 24 V DC and RS-485
- Transceiver for distances of up to 150 m
- Can be used for RS-232/RS-422/RS-485 2-wire interfaces up to 187.5 kbps
- Coexistence with other wireless systems due to the adaptive frequency hopping (AFH) method
- Local configuration via USB interface without separate power supply unit
- Multipoint with up to seven slaves
- 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
- Suitable for worldwide use thanks to adjustable transmission power (-28 ... 14 dBm)

Commercial data

Item number	2313805
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DN26
Product key	DNC661
GTIN	4046356567572
Weight per piece (including packing)	195.4 g
Weight per piece (excluding packing)	195.4 g
Customs tariff number	85176200
Country of origin	DE

Technical data

Product properties

Product type	Interface converter
MTTF	2115 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	850 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	346 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)
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))

Electrical properties

Electrical isolation	VCC // Bluetooth, RS-232, RS-422, RS-485, USB
Maximum power dissipation for nominal condition	2.4 W
Test voltage data interface/power supply	1.5 kV AC (50 Hz, 1 min.)

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)
Nominal supply voltage	24 V DC \pm 20 % (as an alternative or redundant, via backplane bus contact and system current supply)
Typical current consumption	\leq 100 mA (24 V DC)

Output data

Signal

Output name	Digital outputs
Number of outputs	2

Connection data

Supply

Tightening torque	0.56 Nm ... 0.79 Nm
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Interfaces

Signal	Modbus
	PROFIBUS

Data: V.24 (RS-232) interface in acc. with ITU-T V.28, EIA/TIA-232, DIN 66259-1

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
Connection method	D-SUB 9 plug
Pin assignment	DCE (Data Communication Equipment)

PSI-WL-RS232-RS485/BT/2DO - Bluetooth converter



2313805

<https://www.phoenixcontact.com/us/products/2313805>

Transmission length	≤ 15 m
File format/coding	Serial asynchronous UART/NRZ, 8 data, 1/2 stop, 1 parity, 10/11-bit character length
Data flow control/protocols	Software handshake, Xon/Xoff, or hardware handshake RTS/CTS, 3964 compatible

Data: RS-422 interface in acc. with ITU-T V.11, EIA/TIA-422, DIN 66348-1

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
Connection method	Pluggable screw connection
Transmission length	≤ 1200 m
Termination resistor	390 Ω (configurable) 180 Ω 390 Ω
File format/coding	Serial asynchronous UART/NRZ, 8 data, 1/2 stop, 1 parity, 10/11-bit character length
Data flow control/protocols	Automatic control

Data: RS-485 interface, in acc. with EIA/TIA-485, DIN 66259-4/RS-485 2-wire

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
Connection method	Pluggable screw connection
Transmission length	≤ 1200 m
Termination resistor	390 Ω (configurable) 180 Ω 390 Ω
File format/coding	Serial asynchronous UART/NRZ, 8 data, 1/2 stop, 1 parity, 10/11-bit character length
Data flow control/protocols	Automatic control

Data: USB 2.0

Connection method	Mini-USB B, socket
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Wireless

Interface description	Bluetooth 2.1 + EDR
Operating mode	GAP: Generic Access Profile (Method for authentication and connection establishment) SDAP: Service Discovery Application (Method for requesting supported services) SPP: Serial Port Profile (COM port emulation method) DUN: Dial-Up Networking Profile (Modem dialing method) LAP: LAN Access Point Profile (Network connection method)
Frequency range	2.402 GHz ... 2.48 GHz (ISM bandwidth)
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)

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2313805

<https://www.phoenixcontact.com/us/products/2313805>

	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)
	South Korea

Dimensions

Dimensional drawing	
Width	22.5 mm
Height	99 mm
Depth	116 mm

Material specifications

Color (Housing)	green (RAL 6021)
Material (Housing)	PA 6.6-FR

Mechanical tests

Free fall in accordance with IEC 60068-2-32	Free fall: 1 m
Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	Vibration (operation): 5g, 10...150 Hz, 2.5 h, in XYZ direction
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	Shock (operation): 15g, 11 ms period, half-sine shock pulse

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)

Approvals

PSI-WL-RS232-RS485/BT/2DO - Bluetooth converter



2313805

<https://www.phoenixcontact.com/us/products/2313805>

UL, USA/Canada

Identification	508 Listed
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Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A
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EMC data

Electromagnetic compatibility	Conformance with R&TTE directive 1999/5/EC
Noise immunity	EN 61000-6-2:2005

Noise emission

Standards/regulations	EN 55011
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Electrostatic discharge

Standards/regulations	EN 61000-4-2
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Electrostatic discharge

Contact discharge	± 6 kV
Discharge in air	± 8 kV
Comments	Criterion B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
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Electromagnetic HF field

Frequency range	80 MHz ... 3 GHz
Field intensity	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4
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Fast transients (burst)

Input	± 2 kV
Signal	± 2 kV
Comments	Criterion B

Surge current load (surge)

Standards/regulations	EN 61000-4-5
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Surge current load (surge)

Input	± 2 kV
Signal	± 1 kV
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6
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Conducted interference

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2313805

<https://www.phoenixcontact.com/us/products/2313805>

Comments	Criterion A
Voltage	10 V

Emitted interference

Standards/regulations	EN 55032
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Standards and regulations

Free from substances that could impair the application of coating	in accordance with VW-AUDI-Seat central standard P-VW 3.10.7 57 65 0
Standards/regulations	FCC Part 15.247 / ISC RSS 210

Mounting

Mounting type	DIN rail mounting
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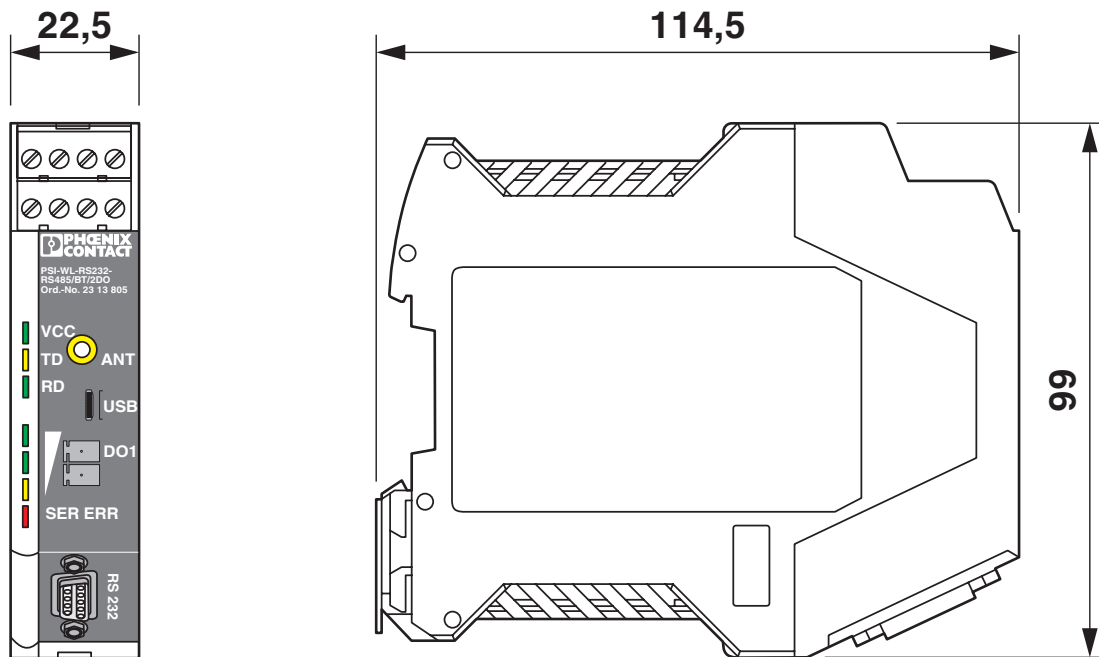


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Drawings

Dimensional drawing



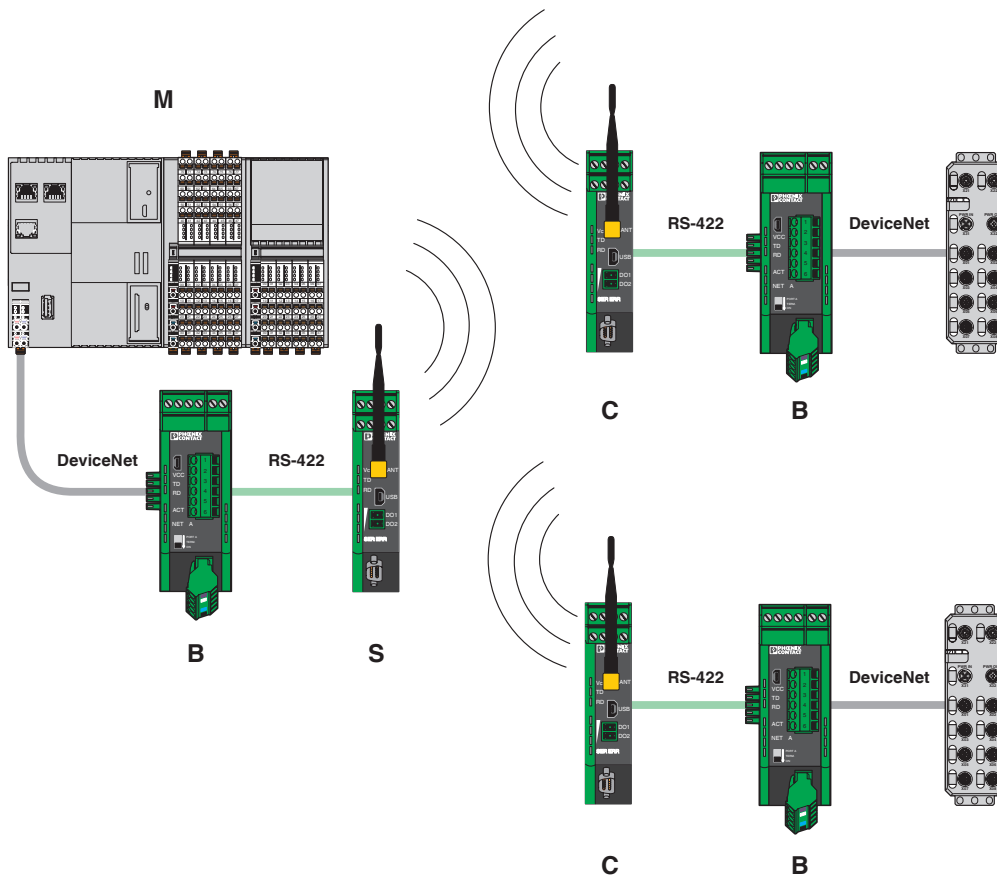
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Application drawing



Example application

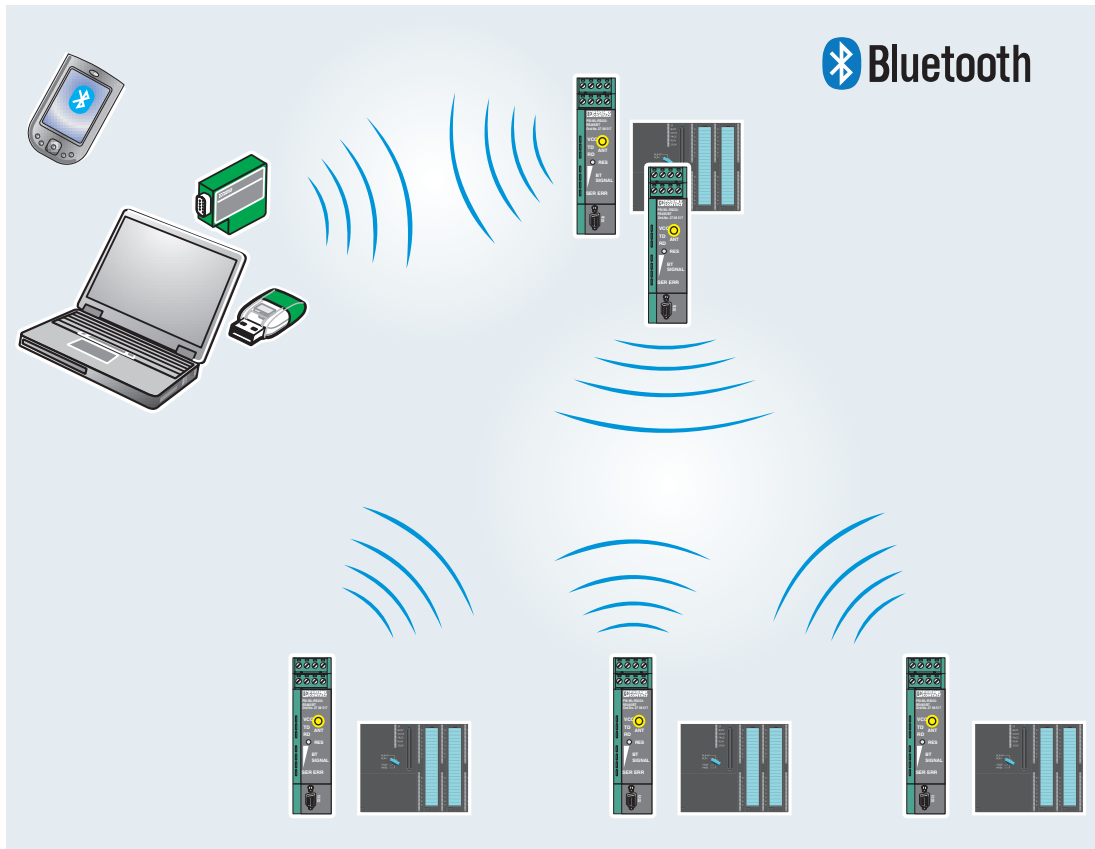
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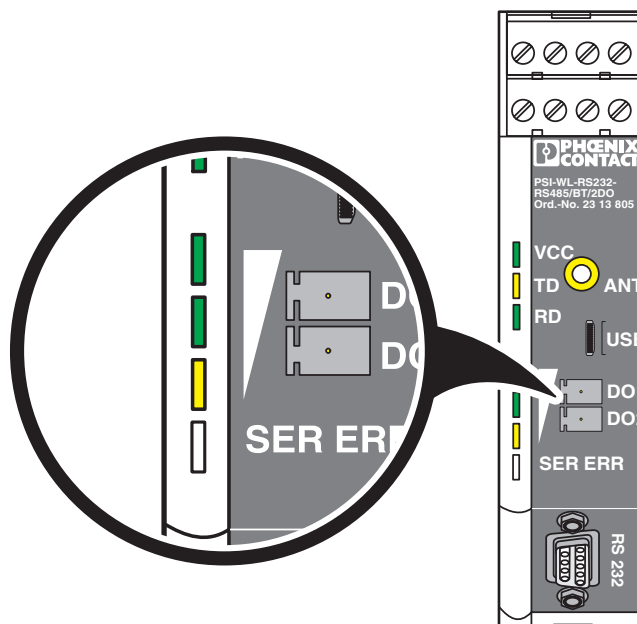
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Functional drawing

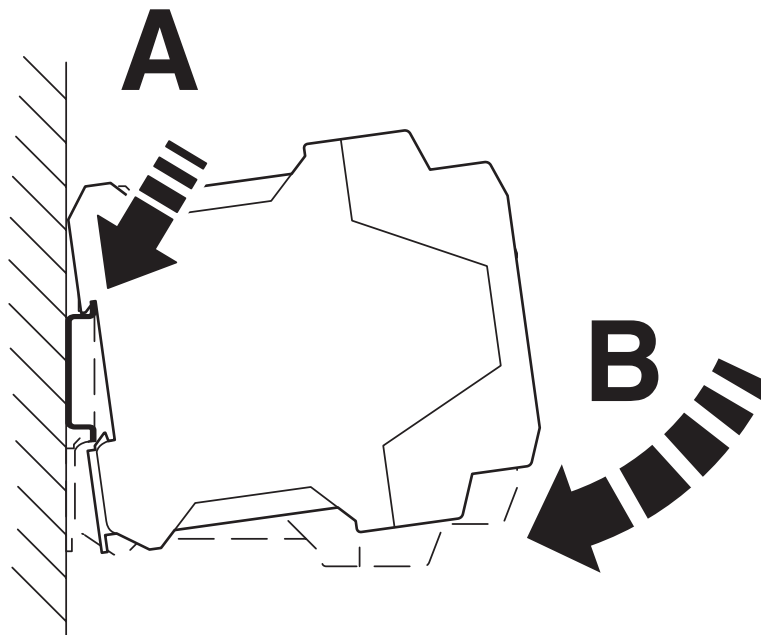


Schematic diagram



Diagnostic and status indicators

Schematic diagram



Mounting

2313805

<https://www.phoenixcontact.com/us/products/2313805>

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(a)-I, 6(c), 7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com