||SENS4

PRG-WPRS2-15DS-01
PRG-WPRS4-15DS-01
PRG-WPRS2-9DS-01
PRG-WPRS4-9DS-01

USB-to-Serial Converter with power supply
Wall-plug power supply and communication cable
QSG-USBSERWP-01, Revision: A, January 2020

CE

Quick start guide

Our passion | Your value™

✓RoHS Compliant

General information

Thank you for purchasing this Sens4 product. This quick start guide contains important safety information, and we encourage you to read this guide prior to installation and use of this product.

Symbols used

Following symbols are used in the quick start guide:

⚠ **WARNING!** Critical information to prevent dangerous situations that can result in serious injury or death.

⚠ **CAUTION!** Important information to prevent dangerous situations that can damage the device or auxiliary equipment.

❗ **ACTION!** Requires action or attention.

ℹ **INFORMATION** Important recommendations and information for efficient use and best practice.
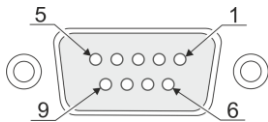
Intended use

The USB-to-Serial Converter is the quickest and simplest way to provide connectivity between an RS-232 or RS-485 capable Sens4 transducer and a computer or other compatible device.
The wall-plug power supply provides supplies power to the transducer.
The converter is compatible with the following transducers:

- Sens4 VPM-5 and VPM-7 SmartPirani
- MKS 901P, 902B, 910, 925
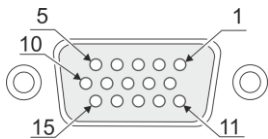- Leybold TTR 101 N (RS-232 version), TTR 911 N (RS-232 version), TTR 200 N

Safety information

This product should be installed and operated by technically skilled or trained personnel only.

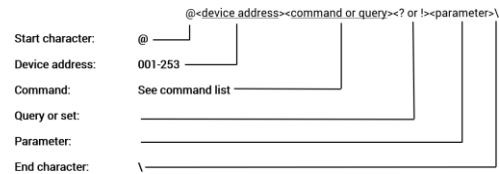⚠ **WARNING!** This product is not intended for use in the presence of flammable gases or other explosive environments.

⚠ **WARNING!** The USB-to-Serial Converter can be used to change transducer settings and configurations that can interfere with the functionality and performance of process equipment that are used together with the transmitter.

ℹ **INFORMATION**: Software provided by Sens4 is supplied "as is" without warranty of any kind or guaranteed compatibility with customer IT systems and environment.

Getting started

The USB-to-Serial Converter requires a software driver to operate with a PC. When connected to a Windows 10 PC, provided the PC has internet access, Windows 10 will automatically install the suitable driver.

Installing USB <-> Serial Converter

Please wait while Setup installs necessary files on your system. This may take several minutes.

For other operating systems, or if the driver does not install automatically, drivers are available on: https://sens4.com.

Once installed, the USB-to-Serial Converter will act as a regular COM port.

Software

The SmartPirani Communicator software is a freeware program to quickly test, adjust and configure Sens4's SmartPirani transducers or compatible transducers from other vendors.
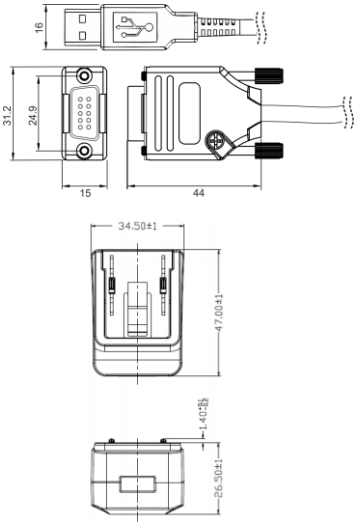The software can be downloaded from:
https://sens4.com/support/

As the converter cable acts like a COM port, other communication software – such as terminals or LabVIEW – can be used to communicate with it, too.

Refer to transmitter operating manual for serial communication commands. Manuals are available online:
https://sens4.com/support/

Pinout Diagram (9-pin version)

Pin	Symbol	Description
3	V+	Supply Voltage 15 VDC
4	GND	Supply Voltage – (return)
7	RS-232TX	RS-232 Transmit / RS-485 (-)
9	RS-232RX	RS-232 Receive / RS-485 (+)

Pinout Diagram – 15-pin version)

Pin	Symbol	Description
1	RS232TX	RS-232 Transmit / RS-485 (-)
2	RS232RX	RS-232 Receive / RS-485 (+)
3	V+	Supply Voltage 15 VDC
4	GND	Supply Voltage – (return)

Connecting the transducer (Smartphone)

It is also possible to operate the USB-to-Serial Converter – and connected transducer – from a USB OTG-capable Android smartphone, enabling quick and easy diagnosis, configuration or measurements in the field.

Android has native COM port support, so all that is required is to install your terminal program of choice from the Google Play Store. Make sure that OTG is enabled when using the USB-to-Serial Converter.

LED Signals

The USB-connector has built-in LEDs to give a visual indication of active communication.

Serial Protocol

Sens4 transducers all use the same syntax as illustrated in the below picture. The protocol is described in detail in each transmitter's respective documentation.

@<device address><command or query><? or !><parameter>\

Start character:	@
Device address:	001-253
Command:	See command list
Query or set:	
Parameter:	
End character:	\

Note that all transducers – regardless of their programmed device address – will reply to address 254. Refer to the connected transmitter's manual for the command list for that transmitter model. Parameters are only relevant for certain commands or queries.

Examples:

Get the most recent pressure reading
Send: `@254P?\`
Receive: `@253ACK1.23E-5;`

Change the pressure unit to Torr (if Device Address is 5)
Send: `@5U!TORR;`
Receive: `@5ACKTORR;`

Specifications

USB specifications	
USB-interface	USB 2.0 type A
Power supply	+ 5 VDC USB
Communication	
Baud rate	4800, 9600, 19200, 38400, 57600, 115200 baud
Data bits	8 bit
Stop bits	1 bit
Parity and handshaking	None
Environment conditions	
Operating ambient temperature	-20 to +50 °C
Storage ambient temperature	-40 to +80 °C
Protection rating, EN 60529/A2:2013	IP40
Humidity, IEC 68-2-38	98%, non-condensing
Power supply (wall-plug)	
Supply voltage	90 – 264 Vac
Frequency	47 – 63 Hz
Current	0.2 mA (Max)
Output current	25 mA (Max)
Short circuit protection	Yes, auto recovery
Safety approvals	CE
Materials	
Connector D-SUB, backshell	Nickel-plated Zinc alloy
Connector D-SUB, screws	Zinc-plated Steel
Approvals	
CE	EN61000-6-2, EN 61000-6-3
RoHS compliance	Directive EU 2015/863

Dimensions

Maintenance

Maintenance is not required during the lifecycle of this product.

Return

Before returning a product to Sens4 proper return forms and a return materials authorization (RMA) must be filled out. The RMA procedure can be found on:

Disposal in the European Union

At the end of life of this product, it must be disposed according to the European Directive 2012/19/EU (WEEE). This product should not be mixed with general household waste.

WARNING! If the product has been exposed to human or environmental hazards materials during its use, ensure proper decontamination before disposal.

For proper treatment, recovery and recycling, please take this product to designated collection points. Please contact your local authority for further details of your nearest designated collection point.
For questions regarding disposal please contact your dealer or Sens4 for further information.

Declaration of Conformity

This declaration of conformity has been made in accordance with EN ISO/IEC 17050-1:2010

Manufacturer:	Sens4 A/S
Address:	Nordre Strandvej 119G
	3150 Hellebaek
	Denmark

We hereby declare under our sole responsibility that the following products:

Product description:	USB-to-Serial RS-232 and RS-484 Converter
	With wall plug supply
Product part numbers	PRG-WPRS2-15DS-01
	PRG-WPRS4-15DS-01
	PRG-WPRS2-9DS-01
	PRG-WPRS4-9DS-01

Complies with the requirements of following relevant European Union harmonization directive:

Electromagnetic Compatibility (EMC) Directive 2014/30/EU
RoHS Directive EU 2015/863

Conformity is assessed in accordance to the following standards:

Reference: Date	Title
EN61326-1: 2013	Product family standard, Measurement, control and laboratory equipment
EN50581: 2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Signed on behalf of:	Sens4 A/S
Place of issue:	Hellebaek, Denmark
Date of issue:	January 6th 2020
Signature:	
Name, Title	Ole Wenzel, Chief Executive Officer

Document number: DOC-USBSER-WP-01, Revision: A

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Warranty and disclaimer

Sens4 warrants this product to be free from defects in materials and workmanship for a period of 24 months from the date of the delivery.

Warranty does not cover:
1. Mechanical or corrosive damage
2. Damage caused by shipping
3. Normal wear and tear
4. Incorrect use or installation
5. Operation beyond the published design limits

Sens4 is not liable for any claims arising from improper use, incorrect installation or use with gases or liquids not compatible with the media wetted materials described in the specifications table. Sens4 is not liable for loss of profits or revenue, overheads, loss of data, reinstallation costs, damage to other equipment or any incidental or consequential damages of any nature.

The Standard Terms and Conditions can be found on www.sens4.com and shall apply to the sales contract and use of this product.

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