

Sensus Interface Radio Tool - SIRT 433 MHz

Installation Manual

On (yellow)	On/Off indication blinking: battery < 2.9 V → RF and BT is switched off
Charge (red)	ON. Battery charging Blinking: charge < 10% Blinking for 5 sec: charge 50%
Bluetooth (blue)	Bluetooth connection on/off Blinking: Bluetooth communication
Warnings → SIRT will be switched off next	Yellow + Red + Blue blinking: Contact Sensus Yellow + Red blinking: battery < 2.7V or T < -20 °C or T > 60 °C

USB Mini Plug	Communication via USB virtual COM port Charging the battery
On/Off switch	Switching device on/off
Antenna plug	For the connection of the external Sensus antenna (order no.: 04410537)

The rear clip can be used to carry the SIRT on a belt. To avoid rain entering the electronics use the caps for the external antenna plug and the USB plug. The SIRT must be carried so that the plugs are on the bottom. The internal multi antenna technology allows good radio reception from each direction. We recommend to turn the SIRT towards an endpoint if the meter reader shades the radio signal.

The SIRT's internal Lithium Ion battery should be used according to this instruction and charged with the dedicated charger to have best capacity for the full battery lifetime. Avoid opening the housing as it would break the warranty seals. The SIRT is designed for the environment conditions specified in this manual.

Parts of delivery (order no.: 04410538)

- SIRT radio modem with internal antennas for SensusRF
- USB cable with Mini B- and Type A-plug
- 100-240V 50/60Hz mains power supply
- This manual

Accessories

- External antenna order no.: 04410537
- Extra 100-240V 50/60Hz mains power supply incl. USB cable order no.: 04410532
- Extra USB cable order no.: 04410536

Battery can be replaced by Sensus' service partner.

Short description

SIRT is a radio modem for Sensus Radio connection to DIAVASO walk-by/drive-by software with following features:

- Receiving of frequently transmitted radio messages from SensusRF radio endpoints.
- Retrieving additional information from the endpoints
- Changing configuration of radio endpoints
- Reading data logger

SIRT provides 2 internal antennas and forwards radio messages from the strongest one received (diversity function)

The SIRT can be connected to a desktop or laptop computer using USB or Bluetooth. Follow system requirements acc. to SensusREAD application software.

Pairing via Bluetooth

The pairing procedure must be done before using the SIRT with the computer, tablet or smartphone.

For pairing with DIAVASO please follow the instructions on the DIAVASO manual.

Pairing with desktop

1. Check your computer's manual for special requirements installation advice and compatibility.
2. Check your computer provides Bluetooth radio (integrated or Bluetooth USB stick).
3. Switch on SIRT.
4. Open your Bluetooth manager and scan for Bluetooth devices.
5. Select the SIRT and pair it with the password "1209".
6. Check which COM port is used.
7. Use this COM port also in your application.

Charging battery (general)

Charging process starts only when SIRT is switched on; yellow LED. To charge the battery use the USB cable (part of delivery). Before first usage battery is charged around 50% only and SIRT must be charged completely.

Red LED for "Charge" will be switched on, when charging starts. Charging stops and red LED is switched off automatically, when battery is full or battery temperature is above 40 °C or below 0 °C.

Charging via a computer

1. Computer is switched on and OS is started.
2. Connect the USB cable to your computer.
3. Required time to charge an empty battery is around 8h (while SIRT is switched on).
4. Take care that your computer will not be switched off or enter Sleep Mode.

Charging via a mains power supply (part of delivery)

1. Connect your power supply with mains power
2. Required time to charge an empty battery is around 4h.

Note: The lifetime of a rechargeable battery is usually around 2 years. When the working time of a fully charged battery is significantly decreased it must be changed. Please do not open the SIRT housing. Due to safety reasons it is not allowed to open SIRT housing and to use any other battery. Send SIRT back to a Sensus store front office and order the battery change.

Using external antenna/car antenna

1. Screw the aerial on the magnetic foot.
2. Check for a good position of the magnet foot on top of your car roof.
3. Make sure that the antenna is securely fixed on top of the roof and connects to the roof's metal only.
4. Keep magnet foot clean and take care your roof's paintwork will not be damaged.
5. Connect the antenna cable with the aerial and lead it to the car's interior. Avoid squeezing the cable in the car's door or window. Cable can be damaged and radio performance is degraded. Keep cable length outside the car as short as possible.
6. Be sure SIRT is switched off; yellow LED is off.
7. Connect the antenna cable with SIRT antenna plug **1**
8. Lead the antenna cable and fix SIRT in the car in a way it will

not distract your attention from driving and traffic. Use the rear clip to fix the SIRT on the empty front-seat passenger's safety belt or find another safe position.

9. Enable external antenna usage in DIAVASO
10. Always drive carefully and not faster than 50 km/h or 30 mph and follow any speed limits and regulations.
11. The user is responsible for safe usage of the equipment. We recommend to stop the car for meter reading, if necessary, to avoid any driving safety risk. You may not configure or handle the SIRT while driving.

Note: Before starting communication via the external antenna, make sure the antenna connections are tight. The user has to ensure the correct fixing of the external antenna and is responsible for such. Sensus is not responsible for any harm caused by an incorrect fixing or operation, or any other incorrect usage of the external antenna. For best performance we recommend the use of the antenna available as an accessory from Sensus. Using other external antennas are not covered by the radio approval (see technical data) and can damage the radio. It is not allowed to connect other devices which are not explicitly approved by Sensus.

For security reasons the antenna should not be used during thunderstorm or heavy wind conditions. The external antenna is only needed when reading from inside a car which is attenuating the radio waves. The external antenna is not required when outside, wearing the SIRT on a belt.

The SIRT can be used with DIAVASO and other dedicated Software. Further information on request.

Technical data

Frequency: 433 MHz
 Power TX: 10 mW radio endpoints
 Modulation: 2-GFSK
 Supported Protocols: Sensus radio protocol RX/TX
 Dimensions: 95 x 145 x 35
 Weight: 295 g
 Bluetooth: Class II Interface
 USB: Version 2.0
 Water proof: IP 53 (without vacuum)
 External antenna cable: 3.0 m
 Typical duration of usage with a fully charged battery: 12 h

Compliance

2014/53/EU (RED)
 2011/65/EU (RoHS)

Environment conditions


Operation: min. -18 °C / max + 60 °C
 Storage: min - 20 °C / max + 60 °C
 Charging battery: min. 0 °C / max. 40 °C

Please follow all security regulations e.g. in intrinsic area or inside an aircraft.

Please do not leave the SIRT inside a car to avoid theft or hot temperature due to direct sunlight

Disposal **2**

This product contains a Lithium Ion rechargeable battery. In the interest of protecting the environment, this battery may not be disposed in household waste after its period of use. The local and national regulations for environmental protection are to be considered.



SENSUS
a xylem brand
Date: 01.06.2017

EU Declaration of Conformity

No. CE/SIRT/0617

Herewith we,

Sensus GmbH Ludwigshafen
Industriestr.16
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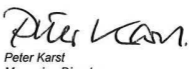
declare under our sole responsibility, that the Sensus Radio Interface Tool (SIRT) is in conformity with the legal regulation of the Directive 2014/53/EU (RED) of the European Parliament and the Council of 16 April 2014 relating to the making available on the market of radio equipment.

Applied normative, harmonised standards:


- EN 300 220-1 V3.1.1
- EN 300 220-2 V3.1.1
- EN 300 328 V2.1.1
- EN 301 489-1 V2.1.1
- EN 301 489-3 V2.1.1
- EN 301 489-17 V3.1.1
- IEC 60950-1:2005 (2nd Ed.) + Am1:2009 + Am2:2013
- EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
- EN 62479:2010
- EN 60529:1989+A1:1999+A2:2013

This declaration is made on behalf of the manufacturer by the Director R&D.

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