



CorivaTag Plus

Localization system

SICK Sensor Intelligence

Described product

CorivaTag Plus

Manufacturer

SICK AG
Erwin-Sick-Str. 1
79183 Waldkirch
Germany

Legal information

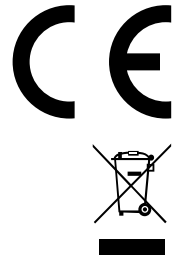
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Original document

This document is an original document of SICK AG.



1 About this document

1.1 Target group

This document is intended for persons who perform the following tasks:

- Incorporation of the product into the application (project planning)
- Mounting
- Operation in daily operations
- De-commissioning

1.2 Further information

You can find the product page with further information via the SICK Product ID:

pid.sick.com/{P/N}/{S/N}

(see "Product identification via the SICK product ID", page 7).

The following information is available depending on the product:

- This document in all available language versions
- Data sheets
- Other publications
- CAD files and dimensional drawings
- Certificates (e.g., declaration of conformity)
- Software
- Accessories

1.3 Related applicable documents

Related applicable documents from SICK

Document	Title	Part number	Source
Operating instructions	Coriva User Manual		https://portal.coriva.io
Technical information	Cybersecurity	8031844	www.sick.com/8031844

1.4 Symbols and document conventions

Warnings and other notes



DANGER

Indicates a situation presenting imminent danger, which will lead to death or serious injuries if not prevented.



WARNING

Indicates a situation presenting possible danger, which may lead to death or serious injuries if not prevented.



CAUTION

Indicates a situation presenting possible danger, which may lead to moderate or minor injuries if not prevented.



NOTICE

Indicates a situation presenting possible danger, which may lead to property damage if not prevented.



NOTE

Highlights useful tips and recommendations as well as information for efficient and trouble-free operation.

Instructions to action

- The arrow denotes instructions to action.
- 1. The sequence of instructions is numbered.
- 2. Follow the order in which the numbered instructions are given.
- ✓ The tick denotes the results of an action.

2 Safety information

2.1 General safety notes

Please observe the safety notes and the warnings listed here and in other sections of this product documentation to reduce the possibility of risks to health and avoid dangerous situations.



CAUTION

Failure to observe the relevant work safety regulations may lead to physical injury or cause damage to the system.

Integrating the product



NOTICE

The product must be integrated correctly to provide the expected functionality.

- Plan the integration of the product in accordance with the machine requirements (project planning).
- Implement the integration of the product in accordance with the project planning.

Repairs and modifications



NOTICE

Improper work on the product

A modified product may not provide the expected functionality.

- Apart from the procedures described in this document, do not repair, open, manipulate or otherwise modify the product.

2.2 Intended use

The CorivaTag Plus is an ultra-wideband (UWB) mobile device for use in the Coriva Real-Time Location System (RTLS) as well as other omlox air 8-certified RTLS systems. The device is intended for the real time localization of objects and equipment in industrial environments.

The product must only be used in accordance with the specified technical specifications and operating conditions.

Incorrect use, improper modification or manipulation of the product will invalidate any warranty from SICK; in addition, any responsibility and liability of SICK for damage and secondary damage caused by this is excluded.

2.3 Improper use

Impermissible use

- Access control or authorization

Impermissible ambient conditions

- Outdoor areas
- Publicly accessible areas
- Explosion-hazardous area
- Corrosive environment

2.4 Qualification of personnel

Any work on the product may only be carried out by personnel qualified and authorized to do so.

Qualified personnel are able to perform tasks assigned to them and can independently recognize and avoid any potential hazards. This requires, for example:

- technical training
- experience
- knowledge of the applicable regulations and standards

3 Product description

3.1 Scope of delivery

Important information



NOTE

The wireless charging station is not included with delivery.

Scope of delivery

- 1 x CorivaTag Plus
- 1 x mounting bracket

3.2 Product identification

3.2.1 Product identification via the SICK product ID

SICK product ID

The SICK product ID uniquely identifies the product. It also serves as the address of the web page with information on the product.

The SICK product ID comprises the host name `pid.sick.com`, the part number (P/N), and the serial number (S/N), each separated by a forward slash.

For many products, the SICK product ID is displayed as text and QR code on the type label and/or on the packaging.



Figure 1: SICK product ID

3.3 Overview of the product



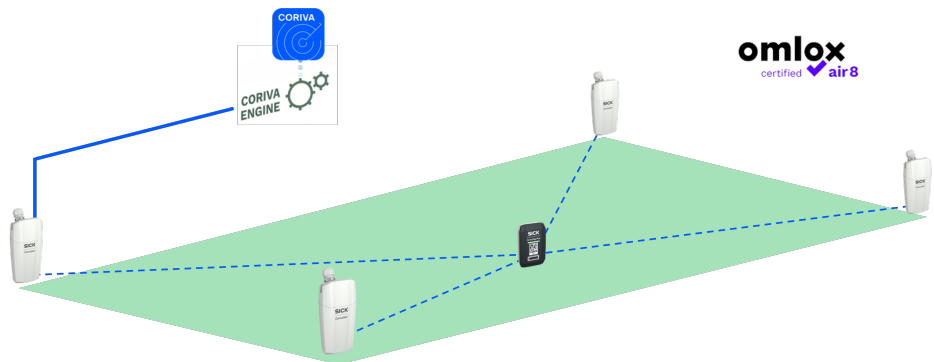
Figure 2: Overview of the product

- ① LED
- ② QR code
- ③ Pushbutton

3.4 Product characteristics

3.4.1 Design and function

Structure



Function

The device is intended:

- For sending UWB signals to CorivaSats or compatible "omlox air 8"-certified RTLS satellites.
- For providing real time position data with a refresh rate.
- To be used in industrial environments to localize, monitor and trace assets.
- For detecting movements using an integrated acceleration sensor.
- For being recharged wirelessly.

3.4.2 Status indicators

LED behavior	Meaning
○	Device switched off
● Flashing green when moving	Connected to RTLS
● Flashing red when moving	Not connected to RTLS
● Green	Identification
● Fading to yellow	Charging
● Flashing red every 10 s	Low battery

○ LED off. ● LED flashes. ● LED illuminates.

4 Mounting

4.1 Mounting the device

Overview

The device can be flexibly mounted on various objects and surfaces using the integrated slide-in mechanism on the rear of the device. Different mounting methods such as screwing, Velcro or adhesive mounting are available. There is also an eyelet on the top side for fastening a carrying strap.

Prerequisites

- A completed project plan is available. For the project plan of an RTLS and its positioning accuracy, use the satellite planning tool at <https://portal.coriva.io>.

Procedure

1. Select a suitable mounting option for the particular mounting plan.
 2. Mount the adapter on the object, ceiling or bracket provided according to the selected mounting method.
 3. Insert the rear of the device into the slide-in mechanism of the mounting clip.
- ✓ The locking mechanism engages audibly.

5 Commissioning

5.1 Device Battery

Overview

The CorivaTag Plus has an integrated rechargeable LiPo battery that is always charged wirelessly.

Charge the battery before the first use.

Procedure

See [see "Charging the device battery", page 11](#).

6 Operation

6.1 Pushbuttons on the device

Located on the front side of the device is a pushbutton with the following functions:

Action	Function	LED signaling
Pressing the pushbutton	Switching on	Fading to green
Pressing the pushbutton for 5 s when the device is switched on	Shutdown	Fading to red
Pressing the pushbutton briefly when the device is switched on	Identification	Flashing green

6.2 Vibration module

The CorivaTag Plus has an integrated vibration motor that can generate haptic signals with various vibration patterns.

Further topics

- <https://portal.coriva.io>

6.3 Sound module

The device has an integrated sound module that can generate acoustic signals with various frequencies.

Further topics

- <https://portal.coriva.io>

6.4 Acceleration sensor

An internal acceleration sensor can activate the position determination when moving and stop it when stationary. This allows the battery life to be extended.

Further topics

- <https://portal.coriva.io>

6.5 Charging the device battery

Overview

The CorivaTag Plus has an integrated rechargeable LiPo battery that is always charged wirelessly.

Procedure

1. Remove the device from the mounting bracket.
2. Ensure that the charging station is switched on and ready for operation.
3. Place the device with the rear side facing down in the center of the charging surface.
4. After charging the device insert it in the mounting bracket again.

7 Maintenance

7.1 Replacing the rechargeable battery

The rechargeable battery is not intended to be replaced by the user.

Replacement and removal of the rechargeable battery must only be carried out by authorized service personnel.

8 Decommissioning

8.1 Disposal

Procedure

- Observe the applicable local and statutory environmental regulations and guidelines for the disposal of industrial and electrical waste.
- Always dispose of unusable devices in accordance with national waste disposal regulations.
- Do not dispose of batteries, accumulators, if present, or electrical or electronic devices with household waste.

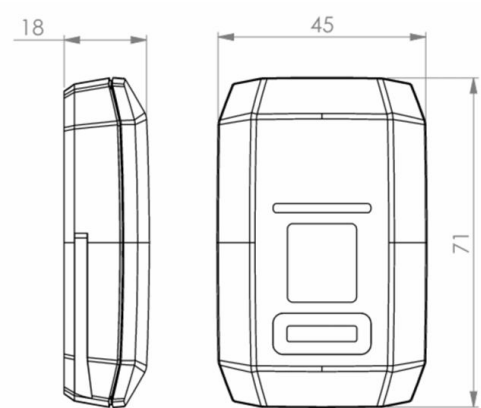


9 Technical data

9.1 Data sheet

Features	
Identification technology	UWB
Localization accuracy	< 10 cm mean static accuracy 20 cm (95% percentile) in a typical static omlox-certification scenario
Spectral output power density	-41.3 dBm/MHz
Maximum output power (conducted)	-3.41 dBm
Operating frequency (localization)	7,737 ... 8,237 MHz, UWB channel 9
Wireless transmission protocol	IEEE 802.15.4z
Type of antenna	Integrated UWB, ISM antennas
Weight	38 g
Housing material	ASA polycarbonate
Housing color	RAL 7016 front, RAL 7047 rear
Dimensions, system (LxWxH)	45 mm x 18 mm x 71 mm
Actuator	Vibration
Charging	Wireless charging (defined charger), max. 150 mA
Mechanics/electronics	
Supply voltage	3.7 V lithium-polymer rechargeable battery 350 mAh
Enclosure rating	IP67
Interfaces	
Configuration interface	ISM band (2,405 ... 2,480 MHz, IEEE 802.15.4)
Ambient data	
Ambient temperature, operation	-20 °C ... +55 °C
Ambient temperature during charging	+5 °C ... +30 °C
Storage temperature/storage period (when switched off)	-20 °C ... 45 °C/one month -20 °C ... 25 °C/six months
Relative humidity	0 ... 90%, non-condensing

9.2 Dimensional drawing



Open source software

This product may contain open source software components. The use of such components is subject to the terms of the respective open source licenses.

For additional information visit www.sick.com/licensetexts.

FCC radio approval

- FCC ID: 2AHDRTAG1P

The device fulfills the EMC requirements for use in the USA, in accordance with the following extracts from the relevant approval:

Interference Statement

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

Modification Statement

[Any] changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Class B Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be

determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

RF Exposure Statement

This device is a radio transmitter and receiver.

This device complies with FCC radiation exposure limits.

The radiated output power of this device is well below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact during normal operation is minimized.

Indoor Use Restriction

This device is intended for indoor use only.

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