

# WIRELESS TAG ASSET PULSE | PHASE



User Manual



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## 1. Overview

### 1.1 General

The WIRELESS TAG ASSET PULSE I PHASE represents the movable device considered for localization within the Agilion WIRELESS LOCATION SYSTEM localization network. It sends its positional information to the localization network's nodes (anchors and gateways) which transmit the data to the localization server for computation and visualization.

### 1.2 Delivery contents WIRELESS TAG ASSET PULSE I PHASE

- 1 WIRELESS TAG ASSET PULSE I PHASE, order number 6032701
- 1 User's manual (this document)
- CR123A battery

### 1.3 Power supply

The power supply of the WIRELESS TAG ASSET PULSE I PHASE is realized via CR123A battery.

### 1.4 Areas of application

The WIRELESS TAG ASSET PULSE I PHASE is designed for an operation temperature range from -10 °C to +50 °C. The battery of WIRELESS TAG ASSET PULSE I PHASE need to be exchanged in dry environments. The device is protected against water splashing on all sides (IP54).

Important information for use in the USA:

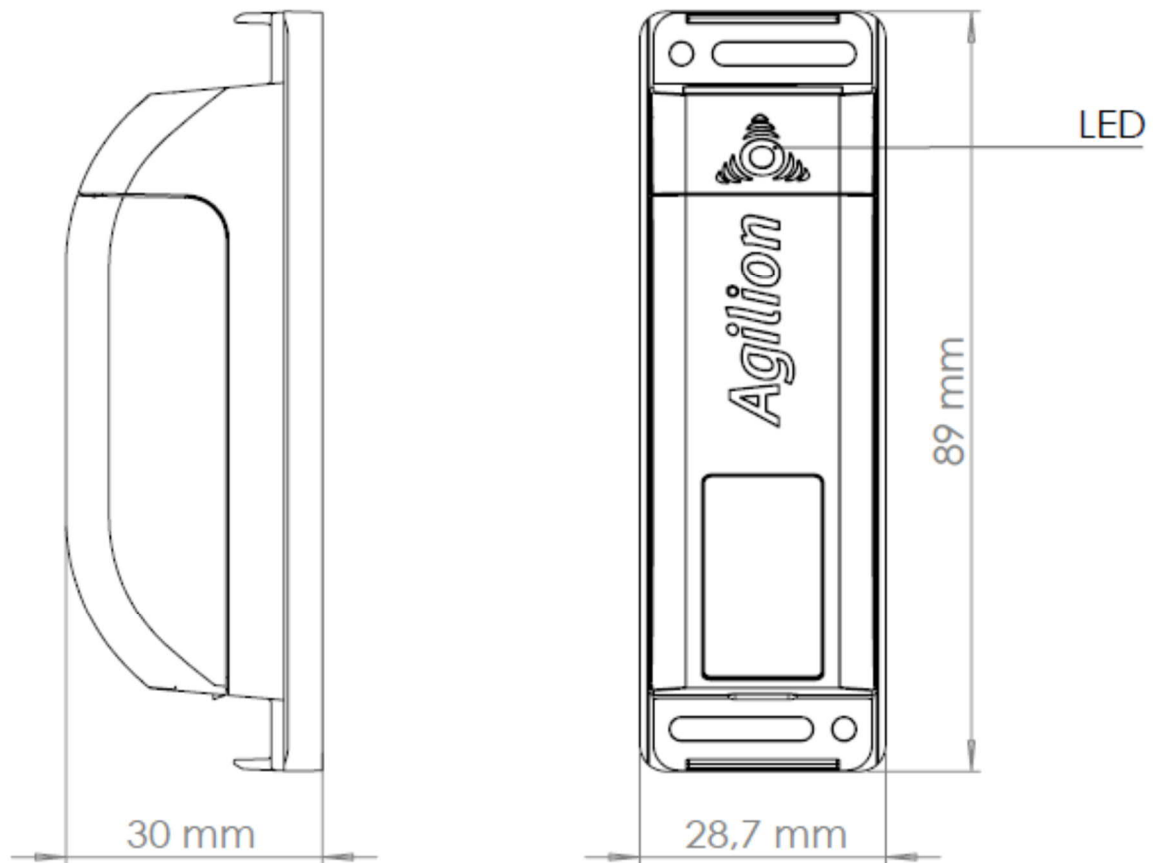
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- This device complies with Part 15 of the FCC rules.

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
  - (2) this device must accept any interference received, including interference that may cause undesired operation.
- Changes modifications or made to this equipment not expressly approved by Agilion GmbH may void the FCC authorization to operate this equipment.
  - This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

## 2 Mechanics, technical data

### 2.1 WIRELESS TAG ASSET PULSE I PHASE



#### 2.1.1 LED

| Status LED display (red) | Description     |
|--------------------------|-----------------|
| Blinking                 | Power-on        |
| Flashing                 | Movement starts |

## 2.1.2 Technical data

### 2.1.2.1 Radio

| Radio PULSE (Location)                            |                                                             |
|---------------------------------------------------|-------------------------------------------------------------|
| Wireless technology                               | IEEE 802.15.4-2011 UWB                                      |
| Frequency range                                   | 3100 MHz – 4800 MHz                                         |
| Output power                                      | 0.023 mW (-16.31 dBm)                                       |
| Antenna                                           | UWB antenna (built-in)                                      |
| Radio PHASE (Communication and optional location) |                                                             |
| Wireless technology                               | IEEE 802.15.4                                               |
| Frequency range                                   | 2.40 to 2.48 GHz ISM-Band                                   |
| Output power                                      | Max. 4 dBm (adjustable)                                     |
| Band width                                        | 2 MHz; Data transmission via 802.15.4 channels (adjustable) |
| Antenna                                           | 2.4 GHz antenna (built-in)                                  |

### 2.1.2.2 Power supply

| Power supply                                    |                                                                     |
|-------------------------------------------------|---------------------------------------------------------------------|
| Energy supply                                   | CR123A battery                                                      |
| Service life (@20°C)<br>(similar to cell phone) | Standby: 1 year<br>Active time: 100% UWB-location @ 1 sec: 6 months |

### 2.1.2.3 Environment and dimensions

| Environment and dimensions  |                              |
|-----------------------------|------------------------------|
| Case                        | Plastic housing              |
| IP-Protection               | IP 54                        |
| Dimensions                  | approx. 89 x 29 x 30 mm      |
| Weight                      | approx. 90 g (incl. battery) |
| Operation temperature range | -10 °C to +50 °C             |

## 3 Installation, initial start-up, safety

### 3.1 General information

- Carefully read ALL items listed in section 3. Installation, initial start-up, safety before installing the devices in order to safeguard correct installation and operation.
- The devices can only be used in combination with the WIRELESS LOCATION SYSTEM.
- Buildup, installation as well as the use of the tools and clients of the localization system are described in the corresponding guides and manuals.

### 3.2 Installation of WIRELESS TAG ASSET PULSE I PHASE

- The WIRELESS TAG ASSET PULSE I PHASE is intended for installation on vehicles, tools and containers for storage and transport.
- For an optimal location, the WIRELESS TAG ASSET PULSE I PHASE has to be mounted such that it has a direct line of sight to the infrastructure devices.
- Before usage of WIRELESS TAG ASSET PULSE I PHASE, check the device for damages such that it will not be damaged during operation.
- The indicated operation temperature ranges must be satisfied.
- The WIRELESS TAG ASSET PULSE I PHASE contains a Lithium battery. The improper use of batteries can cause fire and skin burns.
- The case of WIRELESS TAG ASSET PULSE I PHASE must never be crushed, punctured or exposed to other mechanical violence. Only for battery exchange it is allowed to open the case. Please pay attention to the correct polarity of the batteries (labeling on the battery holder).
- Never expose the WIRELESS ASSET TAG PULSE I PHASE to fire or temperatures above 50 °C.

Do not expose the WIRELESS TAG ASSET PULSE I PHASE over a longer time to direct solar radiation.

### 3.3 Cleaning and maintenance

- It is forbidden to open the case for actions other than the battery exchange.
- The device should only be repaired or accessed for other work by an authorized technical service company.
- Improperly opening or repairing the device can seriously endanger the user.
- Unauthorized opening of the device will annul the warranty claim of Agilion GmbH.
- Do not use any liquids as well as abrasive, caustic or flammable cleaning aids for cleaning the housing. Germany



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