OPERATION MANUAL

ANCHOR TRANSPONDER

EOS-RTLS-AT5200

1.4

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1 Introduction

The EOS RTLS anchor transponders are installed in a certain space as fixed reference points and thus enable the construction of a positioning field within the framework of the EOS RTLS system. They are designed for indoor use only.

Using UWB radio, it is possible to locate mobile RTLS transponders using both two-way ranging (TWR) and time-division-of-arrival (TDOA) methods.

These instructions contain general information on the installation, operation, handling and care of the device as well as information on the structure and its functions.

1.1 Subject to Change

Solcon Systemtechnik reserves the right to make changes to these instructions or the products described from the current series.

Solcon Systemtechnik assumes no responsibility for technical or editorial omissions and/or errors in this manual.

1.2 Declaration of Conformity

This device can be expected to comply with part 15 of the FCC Rules provided it is assembled in exact accordance with the instructions provided with this kit. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference receiving including interference that may cause undesired operation.

You can request the appropriate declaration of conformity for your device by stating the device serial number at:

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E-MAIL: INFO@SOLCON-SYSTEMTECHNIK.DE

2 Safety and Use

Be sure to read this manual before operating the device.

These operating instructions are an important part of the scope of delivery and must also be handed over if the device is passed on.

Accident prevention regulations and safety rules must be observed!

DURING OPERATION, THERE SHOULD BE A DISTANCE OF AT LEAST 20 CM BETWEEN THE DEVICE AND PEOPLE

ONLY AUTHORIZED PERSONS ARE ALLOWED TO OPEN THE DEVICE.

BEFORE SEALING, MAKE SURE THAT THERE ARE NO LOOSE PARTS IN THE DEVICE.

THE DEVICE MUST BE PROTECTED FROM WATER. DO NOT PLACE BEVERAGES OR LIQUIDS ON THE APPLIANCE.

KEEP METALLIC OR KEEP CONDUCTIVE MATERIALS INSIDE THE APPLIANCE.

BEFORE MOVING, MOUNTING OR OPENING THE APPLIANCE, DISCONNECT THE POWER CORD FROM THE MAINS SUPPLY.

DAMAGED CABLES, PROTECTIVE COVERS AND PLUG MUST BE REPLACED IMMEDIATELY.

2.1 RF Exposure Statement

This device has been tested and found to comply with the requirements set forth in 47 CFR Part 15 for both fundamental emissions and unwanted emissions. These limits are designed to provide reasonable protection against any harmful interference when the device is operated in a commercial environment.

Modifying the device without Solcon Systemtechnik GmbH authorization may result in the device being no longer compliant with FCC requirements. In that event, your right to use the device may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

This device complies with the requirements set forth in FCC 47 CFR Section § 1.1307 addressing RF exposure from radio frequency devices. To maintain compliance, the minimum separation distance from the antenna to general bystander is 20 cm.

3 Scope of delivery

1x EOS-RTLS-AT5200

with articulated arm and M8 threaded plug

Figure 1: EOS-RTLS-AT5200

4 Assembly

For mounting the EOS-RTLS-AT5200, it has an articulated arm with an integrated M8 thread. It can be attached to an M8 threaded rod or by screw. In addition, the inclination of the anchor can be adjusted using the articulated arm.

Figure 2: Articulated arm with threaded rod screwed in

Figure 3: Anchor side view

The anchor should be hung with the rear LAN port facing up.

To adjust the incline, the pivot screw (circled in red) must be loosened with a 5mm Allen key. After that, the inclination can be adjusted as desired. The position shown in Fig.3 is defined as the 0° position.

Figure 4: Anchor with tilt adjusted

The anchor must always be secured against falling. To do this, a steel cable is pulled through the gap on the articulated arm and fastened as a loop. (See Fig. 5)

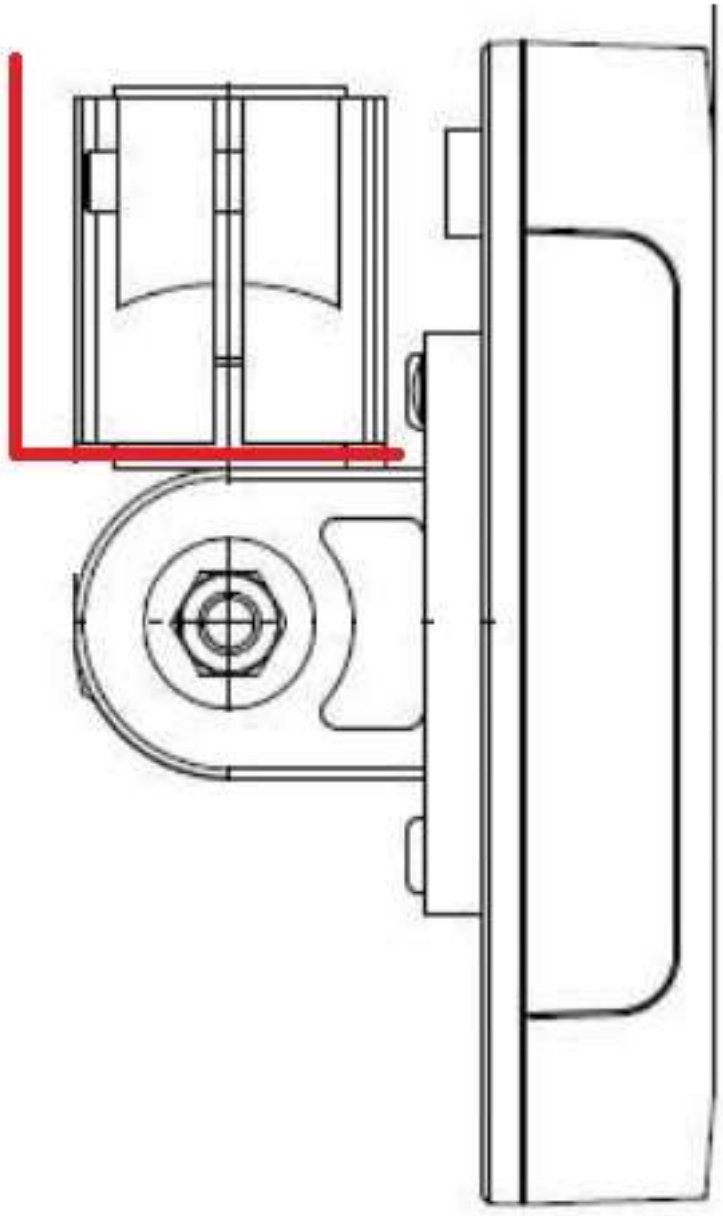

Figure 5: Anchor with indicated fall protection (red)

5 Connection schemes

The anchors can be used in two modes of operation, TWR or TDoA operation.

During installation, the connection diagram for the respective operating mode must be observed.

5.1 TWR mode connection diagram

In TWR mode, the anchor must be connected to a PoE switch using a CAT.7 Ethernet cable. This must ensure both the power supply and the connection to the EOS RTLS system.

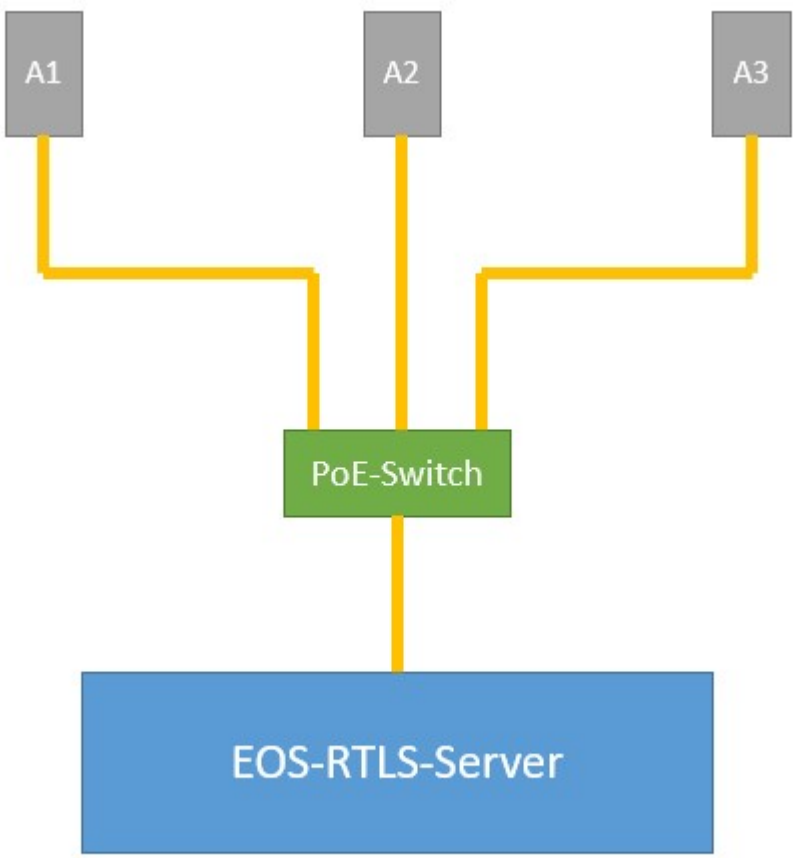

Figure 6: TWR mode connection diagram

5.2 Connection diagram TDoA mode

In TDoA mode, the anchor must also be supplied with a clock signal via an EOS RTLS timer box. To do this, the PoE switch is connected to the input side of the timer box. The output side of the timer box is then connected to the anchors.

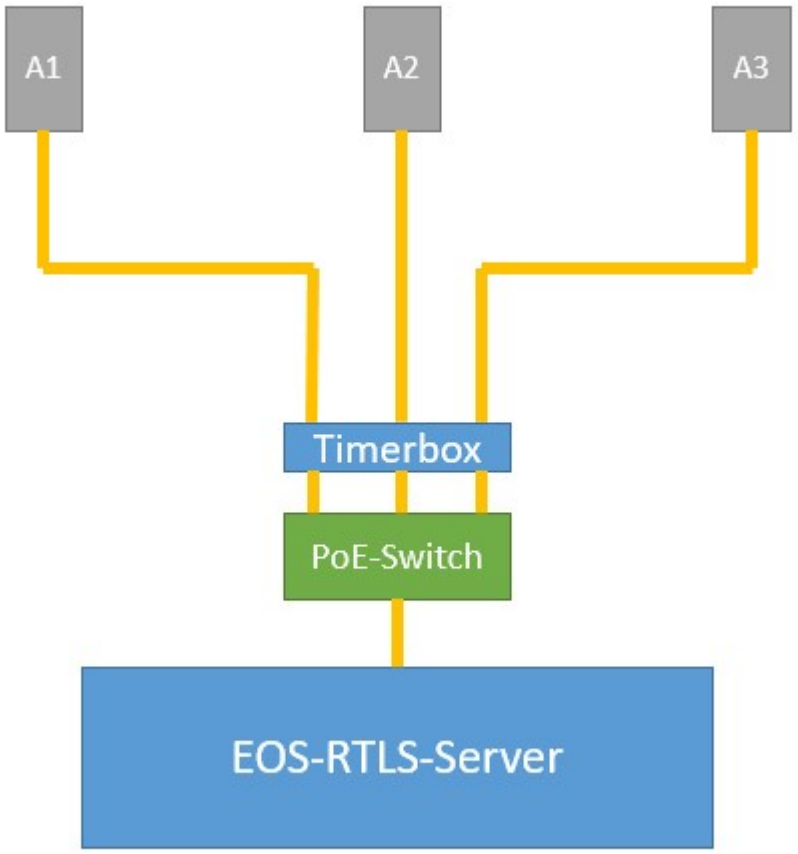

Figure 7: TDoA mode connection diagram

6 Operation

6.1 Description of LEDs

The anchor has three LEDs on the front. (See Fig. 8)

LED1

Color orange

Function: Indicates whether the armature is powered

Behavior: Solid orange when the armature is powered

LED2

Color green

Function: Signals a correct TCP connection to the server

Behavior: Lights up green, while a TCP connection is established

LED3

Colour blue

Function: Indicates whether UWB communication is currently taking place

Behaviour: Lights up blue in the event of an existing UWB communication

Figure 8: Frontside LEDs

6.2 Commissioning

The anchor is put into operation by plugging an Ethernet cable into the RJ45 socket on the back. All LEDs light up simultaneously for approx. one second. After the start-up process, only LED1 lights up permanently in orange. The anchor is now powered up and ready for use.

7 Maintenance and care

The anchor is maintenance-free.

8 Warranty

The anchor is guaranteed for 12 months. The warranty is limited to design and manufacturing defects. Wear parts and damage caused by incorrect handling or use outside of the environmental specifications are excluded from the warranty. The warranty also expires if the device is opened.

In addition, our general terms and conditions apply, which can be found under the following link:

http://www.solcon-systemtechnik.de/agb/

9 Device Specification

Technical specifications	
Dimensions in mm (L/W/H)	150 X 150 X 82,5
Weight	500 g
Input voltage	Power over Ethernet (PoE) nach IEEE 802.3at
Power consumption	5W
Temperature range	-10°C to 60°C

CONTACT

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D Note on environmental protection
At the end of its useful life, this product must not be disposed of with normal household waste, but must be taken to a collection point for the recycling of electrical and electronic equipment.
The symbol on the product, the instructions for use or the packaging indicates this.
The materials are recyclable according to their labeling. By reusing, material recycling or other forms of recycling old devices, you are making an important contribution to protecting our environment. Please ask the municipal administration for the responsible disposal point.

Note:
You are also welcome to contact us at info@solcon-systemtechnik.de with the subject disposal of old devices, we will be happy to help you.

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