



# SIEMENS RTL4083T RTL Transponder Instruction Manual

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# SIEMENS

**SIEMENS RTL4083T RTL Transponder**



## Product Information

### SIMATIC RTLS Localization System

#### Specifications:

- Model: SIMATIC RTLS4083T
- Operating Manual Date: 02/2024
- Part Number: C79000-G8976-C646-06
- Legal Information: Subject to change, last updated 09/2023

## Product Usage Instructions

### 1. Introduction

The SIMATIC RTLS Localization System is designed for accurate real-time location tracking in various industrial environments.

### 2. Device Description

The system consists of the RTLS4083T device, accessories, LED status indicator, display, function key, mounting clip, and charging station.

### 3. Installation & Operation

Follow the installation instructions provided in the manual to set up the system. Ensure proper placement of the RTLS4083T device and accessories for optimal performance.

### 4. Technical Specifications

The system operates based on specific technical specifications outlined in the manual. Refer to the specifications section for detailed information.

### 5. Approvals

Ensure compliance with all relevant approvals and regulations when using the SIMATIC RTLS Localization System.

## FAQ:

- **Q: Can the RTLS4083T device be used outdoors?**

A: The RTLS4083T device is designed for indoor use only due to its technical specifications and limitations.

- **Q: How do I check the battery status of the RTLS4083T device?**

A: The LED status indicator on the device provides information about the battery level. Refer to the manual for detailed instructions on interpreting the LED signals.

SIMATIC RTLS

Localization systems SIMATIC RTLS4083T

Operating Manual

## **Legal information**

### **Warning notice system**

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

- **DANGER**

indicates that death or severe personal injury will result if proper precautions are not taken.

- **WARNING**

- indicates that death or severe personal injury may result if proper precautions are not taken.

- **CAUTION**

indicates that minor personal injury can result if proper precautions are not taken.

- **NOTICE**

- indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

### **Qualified Personnel**

The product/system described in this documentation may be operated only by personnel qualified for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

### **Proper use of Siemens products**

Note the following:

#### **WARNING**

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible

ambient conditions must be complied with. The information in the relevant documentation must be observed.

## **Trademarks**

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication

## **Disclaimer of Liability**

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

## **Introduction**

### **Purpose of the operating instructions**

- These operating instructions support you when installing and connecting the SIMATIC RTLS4083T transponder.

The configuration and the integration of the transponders in a network and the programming of the programming interface are not described in these operating instructions. For more information, refer to the section “Export module “ExportEpaperAPI”” in the “SIMATIC RTLS Data Export Service” document.

### **Scope of validity of the operating instructions**

These operating instructions apply to the following transponders and the associated accessories:

- RTLS4083T (CE; article number: 6GT2700-5DC05)
- RTLS4083T (FCC/NOM/ANATEL; article number: 6GT2700-5DC15)

### **Further documentation**

You can find the complete documentation for all SIMATIC RTLS products at the following address: Link: (<https://support.industry.siemens.com/cs/us/en/ps/25277>)

## **Trademarks**

The following and possibly other names not identified by the registered trademark sign ® are registered trademarks of Siemens AG:

SIMATIC RTLS

## **Industry Online Support**

In addition to the product documentation, the comprehensive online information platform of Siemens Industry Online Support offers support at the following Internet address:

(<https://support.industry.siemens.com/cs/start?lc=en-US>)

- Apart from news, there you will also find:
- Project information: Manuals, FAQs, downloads, application examples etc.
- Contacts, Technical Forum
- The option submitting a support query: (<https://support.industry.siemens.com/My/us/en/>)
- Our service offer:

Right across our products and systems, we provide numerous services that support you in every phase of the life of your machine or system – from planning and implementation to commissioning, through to maintenance

and modernization.

- You will find contact information on the Internet at the following address:

([https://www.automation.siemens.com/aspa\\_app/?ci=yes&lang=en](https://www.automation.siemens.com/aspa_app/?ci=yes&lang=en))

## **SITRAIN - Training for Industry**

- The training offer includes more than 300 courses on basic topics, extended knowledge and special knowledge as well as advanced training for individual sectors – available at more than 130 locations. Courses can also be organized individually and held locally at your location.
- You will find detailed information on the training curriculum and how to contact our customer consultants at the following Internet address:

(<https://new.siemens.com/global/en/products/services/industry/sitrain/personal.html>)

## **RTLS Technology and Practice (ID-RTLS-TP)**

### Training and certification

After completing the RTLS certification training, you will be able to plan and implement small and medium-sized RTLS projects and provide efficient and multifaceted support in large projects. Your RTLS basics will be strengthened and, building upon them, you will receive new tools of the trade in order to offer customers the optimal solution for them. The complete project sequence is taken as a reference and important steps, resources and work results for each phase are presented. Comprehensive practical exercises in connection with troubleshooting techniques and a great deal of input from industrial projects allow you to internalize a confident approach to working with different types of localization projects. With the training documents, you also receive extensive reference material for your daily work.

Link: (<https://www.sitrain-learning.siemens.com/EN/en/rw35251/Industrielle-Identifikation-RTLS-Technologie-und-Praxis>)

## **Cybersecurity notes**

Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines, and networks.

In order to protect plants, systems, machines, and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions form one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For more information on industrial cybersecurity measures that may be implemented, please visit:

(<https://www.siemens.com/global/en/products/automation/topic-areas/industrial-cybersecurity.html>)

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends performing product updates as soon as they are available and using only the latest product versions. Use of product versions that are no longer supported, and failure to apply latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under:

(<https://new.siemens.com/global/en/products/services/cert.html>)

## **Note on firmware/software support**

Check regularly for new firmware/software versions or security updates and apply them. After the release of a new

version, previous versions are no longer supported and are not maintained.

## Security recommendations

### General

Note the following security recommendations to prevent unauthorized access:

- Keep the firmware up to date. Check regularly for security updates for the device. You can find information on this at the Industrial Security (<https://new.siemens.com/global/en/company/topic-areas/future-of-manufacturing/industrial-security.html>) website.
- Inform yourself regularly about security recommendations published by Siemens ProductCERT (<https://new.siemens.com/global/en/products/services/cert.html>).
- Evaluate your plant as a whole in terms of security. Use a cell protection concept with suitable products.
- This product requires an additional security concept to prevent unauthorized access.
- Transponder and infrastructure can be configured for radio channels according to IEEE 802.15.4-2015. You will find details in the section “Technical specifications”.
- Ensure that the radio frequencies are not used for other purposes and are not affected by other interfering signals. This should be ensured within the operating range of the localization system.
- Interference in the frequency band used can impair the system and, in extreme cases, lead to localization failure.

### Physical access

- Restrict physical access to the device to qualified personnel.
- Disable unused physical interfaces of the device. Unused interfaces could be used to gain access to the operating site.

### Recycling and disposal



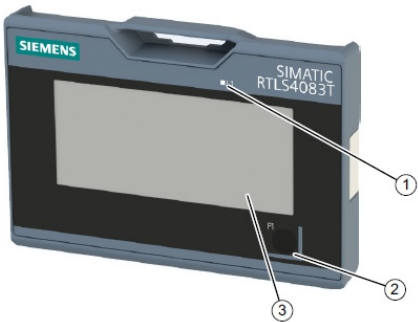
The products are low in harmful substances, can be recycled and meet the requirements of the Directive 2012/19/EU for disposal of waste electrical and electronic equipment (WEEE). Do not dispose of the products at public disposal sites.

For environmentally compliant recycling and disposal of your electronic waste, please contact a company certified for the disposal of electronic waste or your Siemens representative.

Note the different national regulations.

## Device description

### Characteristics

SIMATIC RTLS4083T			Characteristics	
			Design	① Status indicator L1 (LED) ② Function key F1 ③ Display
		1	General	The transponder is a mobile device for localization in the RTLS localization system. It sends position data to gateways which transmit the data to the Locating Manager server.
				Information can be transmitted to the transponder via a programming interface on the Locating Manager and shown on the display.
	2			
3				

## Order data for RTLS4083T and accessories

Table 2-1 RTLS4083T order data









		Article number
SIMATIC RTLS4083T	CE	6GT2700-5DC05
	FCC/NOM/ANATEL	6GT2700-5DC15

Table 2-2 Accessories order data (not included in product package)

	Article number
SIMATIC RTLS charging station for 10 transponders with power supply unit and power plug for region: EU	6GT2790-0DD02
SIMATIC RTLS charging station for 10 transponders with power supply unit and power plug for region: USA	6GT2790-0DD03
Charging cradle without power supply unit for 10 transponders	6GT2790-0DD20
Power supply unit for charging cradle without power plug	6GT2790-0DD40
Power plug for region: EU	6ES7900-0AA00-0XA0
Power plug for region: USA	6ES7900-0DA00-0XA0
SIMATIC RTLS mounting clip for RTLS4083T (10 units)	6GT2790-0DE30
SIMATIC RTLS Power mounting clip for RTLS4083T (1 unit)	6GT2790-0DE40

## LED status indicator, display & function key

The operating states of the transponder are indicated by the LEDs. The states can be off, on and flashing. Table 2-3 LED status indicator

LED	Meaning
	Lights up green once for 1.5 seconds when the transponder is restarted.
	Briefly flashes green once when the F1 function button is pressed, the battery voltage is sufficient and the transponder is outside of the charging station or the Power mounting clip.
	Continuously flashes green when the transponder is fully charged and in the charging station or the Power mounting clip.
	Lights up green when the transponder is fully charged and in the charging station or the Power mounting clip.
	Briefly flashes red once when the F1 function button is pressed, the battery voltage is low and the transponder is outside of the charging station or the Power mounting clip. However, the transponder is available and localizable.
	Flashes red (user LEDs flash) if you trigger flashing via the Locating Manager. You can configure the duration and frequency of flashing via the Locating Manager. Note that error states may not be detected by the user LED flashing.
	Continuously flashes red when the transponder is in the charging station or the Power mounting clip and the battery is defective. Remove the transponder from the charging station or the Power mounting clip immediately and do not recharge this transponder. Contact customer service.
	Lights up red if there is an error during charging.

### Note

Observe the notes in sections “RTLS4083T operation (Page 17)” and “Charging instructions for the RTLS charging station (Page 18)”.



Table 2-4 Display and function key

Display	Meaning
Display	5 background images can be saved 20 text fields with 58 characters each 20 fonts and font sizes, including bar codes
F1 function key	If this function key is pressed, the message is forwarded to the program interface.  When the F1 function button is pressed, the charge state of the battery is evaluated and, depending on its voltage, the LED briefly flashes green or red. In the Locating Manager, you can configure a transponder parameter to define the threshold value below which the battery voltage is defined as too low for operation, a “low power” message is generated and the LED flashes red. Refer to the notes in the section <a href="#">“RTLS4083T operation”</a> (Page 17).

### Dimension drawing of RTLS4083T

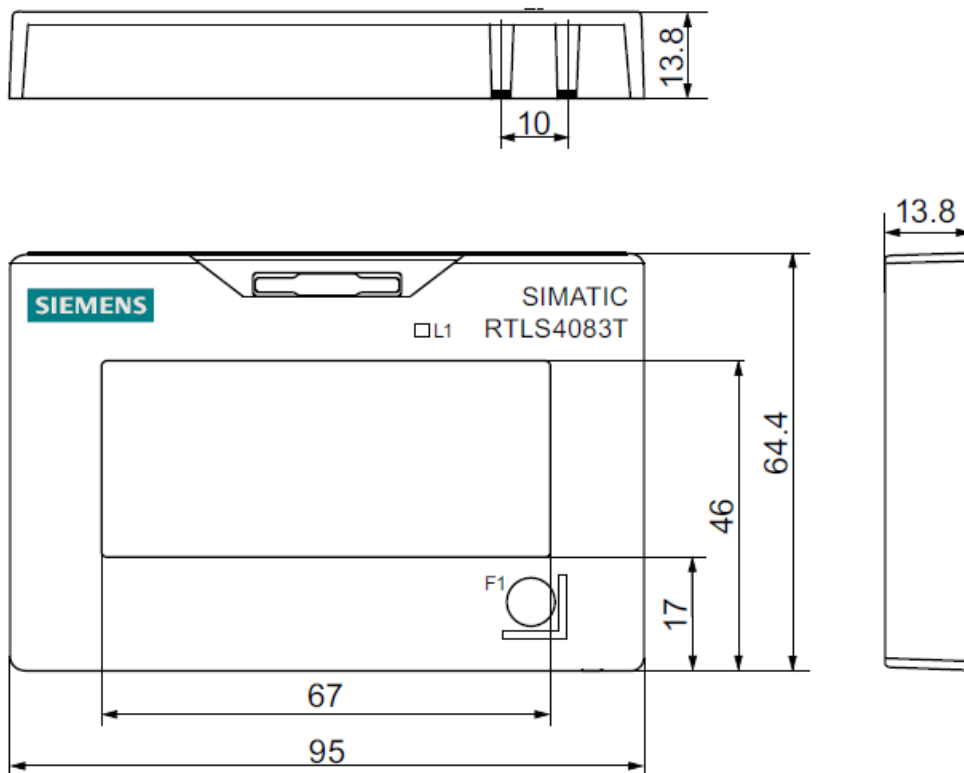


Figure 2-1 Dimension drawing of SIMATIC RTLS4083T - All dimensions are given in millimeters

### Dimension drawing of RTLS4083T

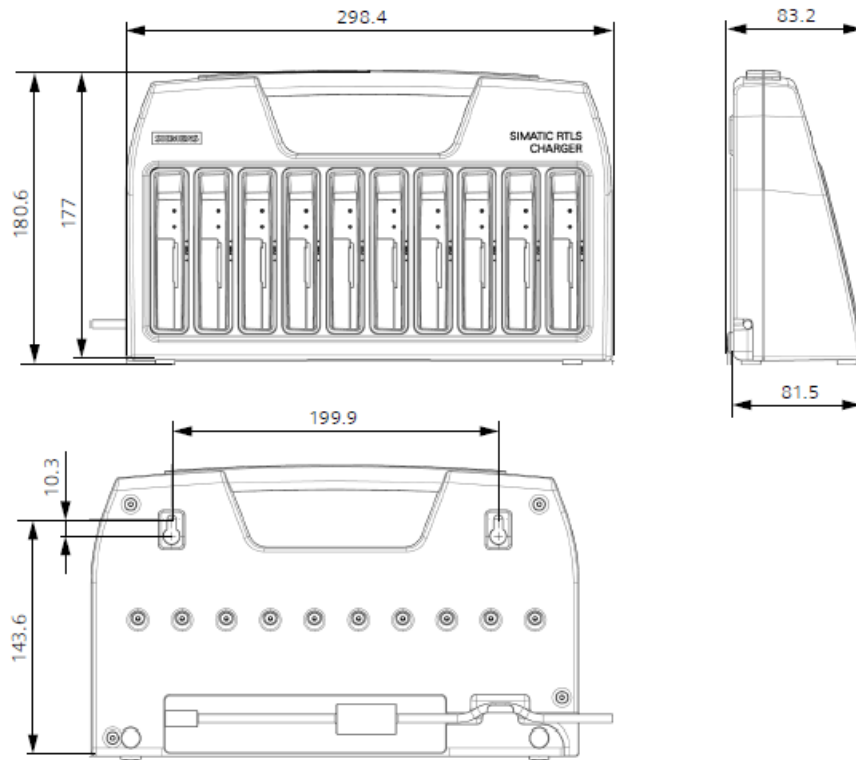
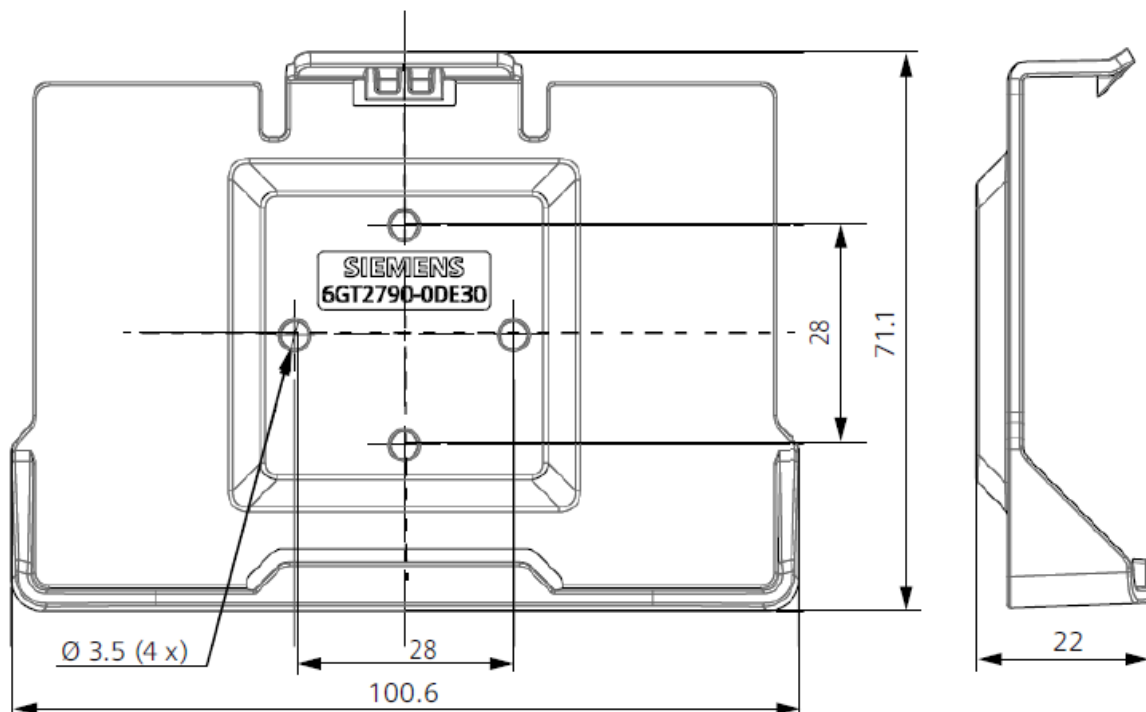


Figure 2-2 Dimension drawing of SIMATIC RTLS charging station (not included with the product) – All dimensions are given in millimeters

#### Dimension drawing of RTLS4083T mounting clip



Dimension drawing of SIMATIC RTLS mounting clip for RTLS4083T (not included with the product) - All dimensions are given in millimeters

#### Dimension drawing of RTLS4083T Power mounting clip

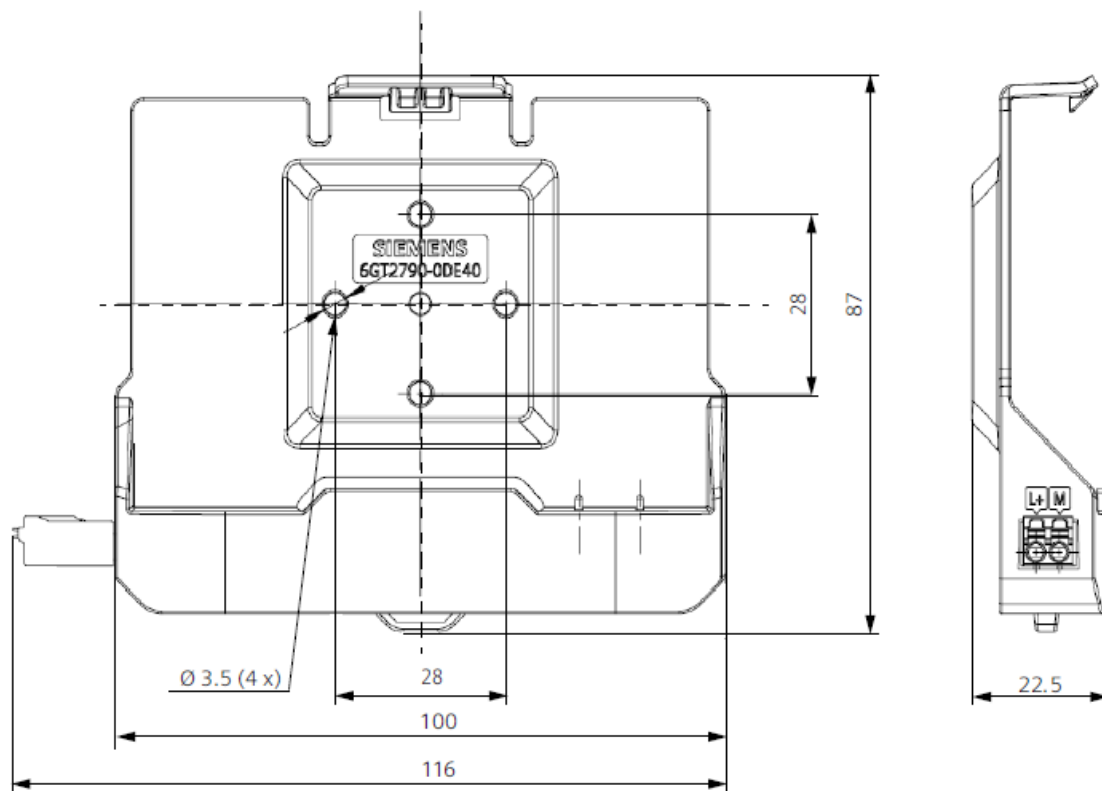


Figure 2-3 Dimension drawing of SIMATIC RTLS Power mounting clip for RTLS4083T (not included in product package) - All dimensions are given in millimeters

## Installation & operation

### Notes on installation

#### Note

Before you install the transponders, read this section carefully to ensure problem-free installation and commissioning.

The transponders can only be used in conjunction with the RTLS localization system.

Install the transponder in such a way that it has a direct line-of-sight connection to the gateways (360° panorama view). Any type of material can impact wireless localization. Wireless localization through metal is not possible. In this case, localization via wireless reflections can occur which results in an inaccurate localization.

Check the transponder for damage before installation. Protect the display from objects that could scratch or otherwise damage it. The specified operating temperature ranges must be observed.

The transponder contains one lithium ion battery.

### CAUTION

- Contact with the battery fluid
- Incorrect handling of the transponder may damage the battery and cause fluid to leak out of the battery.
- Avoid contact with the battery fluid. Rinse skin that comes into contact with battery fluid with water. If fluid from the battery gets into the eye, seek medical attention.

### CAUTION

#### Handling batteries

There is a risk of fire and, in extreme cases, of explosion in the following cases:

- If the battery is improperly charged and discharged• If the polarity is reversed

- If a short-circuit occurs
- This applies to lithium-ion batteries:
- Do not squeeze
- Do not heat and do not burn
- Do not short-circuit
- Do not disassemble
- Do not immerse in liquid – the battery may crack or burst

## **CAUTION**

### Fires and burns

Improper handling of the battery can lead to fire and skin injuries.

- The enclosure of the transponder must not be squashed, punctured or exposed to other mechanical influences.
- Never expose the transponder to fire, temperatures above 40 °C or direct sunlight for an extended period of time.

## **Reflections and interferences**

The antenna fields are weakened by absorbing materials and reflected by conducting materials. When electromagnetic fields are reflected or there are other radio sources, this will result in interferences. These circumstances will result in incorrect measurements; however, these can be largely detected and corrected with the appropriate software (e.g. SIMATIC RTLS Locating Manager). We still recommend that you prevent these influences. Especially objects that cannot be penetrated by radio waves can cause localization errors.

### Note

Metal surfaces reflect radio waves more than any other types of surfaces. Water, on the other hand, attenuates radio waves. You should therefore evaluate your working environment and integration for these influences. During installation, pay attention to sufficient distance from such reflective surfaces so that localization is not impaired.

## **Coexistence and de-sensing**

To prevent interfering with each other, radio applications will use different frequency bands. Use of these frequency bands is subject to state regulation. Because a frequency range is considered a finite good, technologies were developed over the years that enable a coexistence of different radio applications in the same frequency band. These technologies are also used by SIMATIC RTLS. However, interferences can still be caused by other radio devices. Arrangements are being made here, too, so that these interferences do not impact the operation of the RTLS localization system. To keep interferences to a minimum, the RTLS infrastructure components must not be installed in the close vicinity of other radio applications. Strong senders in close vicinity can interfere with the reception, even when they are located in neighboring frequency bands (de-sensing). This is true, for example, for the 2.4 GHz ISM band and PULSE in the UWB channel 5.

## **Installation with Power mounting clip**

## **NOTICE**

Observe general installation instructions

Observe the general installation instructions for the transponder described above this paragraph.

- The Power mounting clip is only intended for vertical installation, so that the contacts of the Power mounting

- clip are at the bottom. Installation can be performed as described in section “Technical specifications of the
- RTLS4083T Power mounting clip (Page 23)”.
    - Only operate the Power mounting clip with a suitable power supply with the permissible values, see section “Technical specifications of the RTLS4083T Power mounting clip (Page 23)”.
      - Use the lug at the bottom of the Power mounting clip to relieve the strain on the cables to the plug on the left of the Power mounting clip.

## **Operation**

### **RTLS4083T operation**

- **Note**

Operate the transponder only with the accessories intended for this purpose, which are listed in the section “Order data for RTLS4083T and accessories (Page 9)”.
- The transponder is delivered in the switched-off state. To commission the transponder, it has to be inserted into the associated charging station or Power mounting clip once so that the green LED on the device lights up.
- The transponder is operated with the F1 function key on the front panel. The function of the key can be programmed via the programming interface.
- If the voltage is too low, the transponder switches off automatically and sends a “Low-Power” message to the Locating Manager. The limit above which the transponder sends this message is configurable. In this case, the transponder must be fully recharged within 3 months to avoid deep self-discharge and damage to the battery.

### **RTLS4083T operation with Power mounting clip**

#### **Note**

Operate the transponder only with the accessories intended for this purpose, which are listed in the section “Order data for RTLS4083T and accessories (Page 9)”.

The transponder is delivered in the switched-off state. To commission the transponder, it has to be inserted into the associated charging station or Power mounting clip once so that the green LED on the device lights up. The mode of the transponder in the active clip behaves like operation in the charging station. There is no differentiation by the transponder or Locating Manager. This also includes charging of the battery like in the charging station. When the transponder is operated continuously in the active clip, the battery is regularly charged, with the transponder being supplied by the external supply voltage.

The transponder is only charged if the ambient conditions as described in the sections “Charging instructions for the RTLS charging station (Page 18)” and “RTLS4083T technical specifications (Page 21)” are met.

## **Cleaning and maintenance**

The enclosure of the transponder must not be opened.

The devices specified in this document may only be repaired or opened for other types of work by an authorized maintenance company.

Improper opening or repairing of the devices may result in serious risks for the user. Opening the devices without permission renders the warranty of the Siemens AG null and void.

Do not clean the devices with liquids or abrasive, caustic or flammable cleaning products.

#### **Note**

Due to the integrated battery, the RTLS4083T transponder is a hazardous good. Observe the applicable regulations when shipping.

## Charging instructions for the RTLS charging station

Mount the charging station in a location with cool ambient temperature. Then, fully charge the transponder using the charging station.

The temperature of the transponder and the ambient temperature must not exceed 40 °C for the transponder to be charged. The higher the temperature, the longer it takes to charge the transponder.

If the transponder exceeds 55 °C during charging, remove the transponder from the charging station. Allow the transponder to cool down and try charging it again. If the transponder becomes too hot again, remove the transponder from the charging station and contact customer service.

### 3.4 Charging instructions for the RTLS charging station

The battery has a natural self-discharge. When stored in a state not fully charged, the transponder is discharged after approximately 6 months and must be recharged. If the transponder is completely discharged, the integrated battery may be damaged.

To charge, insert the transponder fully in a charging bay of the charging station. The front of the transponder must face away from the side of the cable guide. The start and status

of the charging process are signaled via the LED display on the transponder. A full charging process takes approximately 8.5 hours. To ensure correct operation of all 10 charging bays and to avoid damage to the transponders, only use the power supply unit provided with the charging station.

Read also the descriptions of the operating states of the transponder in section “LED status indicator, display & function key (Page 10)”.

## Technical specifications

### RTLS4083T technical specifications

Table 4-1 Technical specifications of the transponder RTLS4083T

- Product name SIMATIC RTLS4083T
- PULSE radio frequencies (localization)
- Wireless method IEEE 802.15.4-2015 UWB HRP PHY
- Transmission speed 850 Kbps
- Operating frequency rated value 3993.6 MHz (UWB channel 2; CE, FCC, NOM, ANATEL)
- 6489.6 MHz (UWB channel 5; CE)
- Bandwidth 499.2 MHz
- Frequency range 3100 MHz ... 4800 MHz (CE, FCC, NOM, ANATEL)
- 6000 MHz ... 7000 MHz (CE)
- Transmit power 0.037 mW (-41.3 dBm/MHz)
- Range Maximum 30 m
- Accuracy of the localization (typical) 0.1 m
- Antennas Built-in UWB antenna
- PHASE radio frequencies (communication and optional localization)
- Wireless method IEEE 802.15.4
- Transmission speed 1 Mbit/s
- Operating frequency rated value 2405 MHz ... 2480 MHz
- Bandwidth 2 MHz; data transmission on 802.15.4; channels configurable
- Frequency range 2400 MHz ... 2483.5 MHz
- Transmit power 0.00025 mW ... 4 mW (configurable)
- Range Maximum 50 m

- Accuracy of the localization (typical) 3 m
- Antennas Built-in 2.4 GHz antenna
- Supply voltage
- Supply voltage 3.7 V lithium ion rechargeable battery (1950 mAh)
- Service life (at 20 °C) Standby: 1 year
- Operation: 100% UWB localization at 1 second: 6 months
- Display updates every 10 seconds without localization: 25 days
- Permitted ambient conditions
- Ambient temperature
- During storage -10 °C ... +50 °C
- During transport -10 °C ... +50 °C
- During operation -10 °C ... +50 °C
- During display operation 0 °C ... +40 °C
- During charging +10 °C ... +40 °C

### **Design, dimensions, weights and connectors**

- Dimensions (L x W x H) 95 mm x 64,6 mm x 13,8 mm
- Weight 85 g
- Degree of protection IP65  
Fastening method Mounting clips
- Enclosure Plastic enclosure
- Color Titanium gray

### **RTLS charging station technical specifications**

Table 4-2 Technical specifications of the SIMATIC RTLS charging station (not included in the product package)

- Product name SIMATIC RTLS charging station
- Power supply unit 110 V ... 220 V
- Input voltage of RTLS charging station 5 V DC
- Power loss of RTLS charging station 25 W

### **Ambient temperature**

- During storage -10 °C ... +50 °C
- During transport -10 °C ... +50 °C
- During operation See Permitted ambient conditions of the RTLS4083T transponder
- Design, dimensions, weights and connectors of RTLS charging station

Dimensions (L x W x H) 298.4 mm x 180.6mm x 83.2 mm

- Weight 1092 g
- Degree of protection IP00

- Enclosure Plastic enclosure (PC 10 GF)
- Color Titanium gray

### Technical specifications of the mounting clip RTLS4083T

Table 4-3 Technical specifications of the RTLS4083T mounting clip (not included in product package)

- 6GT2790-0DE30
- Product name SIMATIC RTLS mounting clip for RTLS4083T
- Material Plastic, PC GF10
- Color Titanium gray
- Permitted ambient temperature
- During storage -10 ... +55 °C
- During transport -10 ... +55 °C
- During operation
- See Permitted ambient conditions of the RTLS4083T transponder
- Dimensions (L x W x H) 100.6 x 71.1 x 22 mm; tolerances according to DIN 16742-TG5
- Weight 29 g
- Fastening method 4 x screws (max. Ø 3.5 mm) with washers (not included in product package)
- Ensure that the screw head does not damage the transponder.
- Verification of suitability CE
- Table 4-4 Technical specifications of the RTLS4083T Power mounting clip (not included in product package)
- 6GT2790-0DE40
- Product name SIMATIC RTLS RTLS4083T Power mounting clip
- Material Plastic, PC GF10
- Color Titanium gray
- Permitted ambient temperature
- During storage -25°C ... +75 °C
- During transport -25°C ... +75 °C
- During operation
- See Permitted ambient conditions of the RTLS4083T transponder during charging
- Dimensions (L x W x H) 116 x 87 x 22.5 mm; tolerances according to DIN 16742-TG5
- Weight 44 g (without plug) 45 g (with plug)
- Fastening method 4 x screws (max. Ø 3.5 mm) with washers (not included in product package)
- Ensure that the screw head does not damage the transponder.
- Type of power supply 1 x "Phoenix" plug (included in product package)
- 2 x cables with cross-section 1 mm<sup>2</sup> and wire end ferrules with at least 10 mm length (not included in product package)
- Make sure to observe the polarity marked on the Power mounting clip.
- Supply voltage 19 ... 25 V DC
- Rated voltage 24 V DC
- Power consumption Maximum 8 W

Technical specifications of the RTLS4083T Power mounting clip



Current consumption	Maximum 0.3 A
Verification of suitability	CE





## Approvals





### Country-specific approvals

All the latest radio approvals for RTLS devices are available on the Internet

(<https://support.industry.siemens.com/cs/de/de/view/109784340>).

If a device has one of the following marks, the corresponding approval has been obtained.

Labeling	Description
	Australia/New Zealand
	South Africa (ICASA) Independent Communications Authority of South Africa, Sandton Radio Equipment Type Approval Certificate
	United Arab Emirates TRA
	<ul style="list-style-type: none"> <li>EAC (Eurasian Conformity)</li> <li>Eurasian Economic Union of Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic and the Russian Federation</li> <li>Declaration of conformity according to the technical regulations of the customs union (TR CU)</li> </ul>
Alternative: FCC ID: XXXXYYZZZZ	USA (FCC) This device complies with part 15 of the FCC rules.
IC: XXXXYYZZZZ	Canada (ISED) This device complies with Industry Canada licence-exempt RSS standard(s).

Labeling	Description
 <p>Alternative: ANATEL: XXXXYYZZZZ</p>	<ul style="list-style-type: none"> <li>• Brazil (ANATEL)</li> <li>• Certificado de Homologação</li> <li>• REPÚBLICA FEDERATIVA DO BRASILAGÊNCIA NACIONAL DE TELECOMUNICAÇÕES</li> <li>• Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados. Para maiores informações, consulte o site da ANATEL (<a href="http://www.ana-tel.gov.br">www.ana-tel.gov.br</a>).</li> </ul>
	<ul style="list-style-type: none"> <li>• Importer UK:</li> <li>• Siemens plc, Sir William Siemens House, Princess Road, Manchester M20 2UR</li> </ul>
	<ul style="list-style-type: none"> <li>• Mexico (NOM)</li> <li>• La operación de este equipo está sujeta a las siguientes dos condiciones:</li> <li>• (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.</li> </ul>
<p>CMIIT ID: XXXXYYZZZZ</p>	<ul style="list-style-type: none"> <li>• China (CMIIT)</li> <li>• Radio Transmission Equipment Type Approval Certificate</li> <li>• In accordance with the provisions on the Radio Regulations of the People's Republic of China, the following radio transmission equipment, after examination, conforms to the provisions with its CMIIT ID.</li> </ul>
	<ul style="list-style-type: none"> <li>• South Korea (KCC)</li> <li>• Korea Communications Commission</li> <li>• Certificate of Broadcasting and Communication Equipments Republic of Korea</li> </ul>

#### Note

The specified approvals apply only when the corresponding mark is printed on the product. You can check which of the following approvals have been granted for your product by the markings on the type plate.

You can find the current EU Declaration of Conformity for these products on the Internet at Siemens Industry Online Support.

Link: (<https://support.industry.siemens.com/cs/de/en/ps/25277/cert>)

The products described in this document meet the requirements of the following EU directives:

- **RoHS Directive 2011/65/EU**

Directive of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment, official journal of the EU L174, 1 July 2011, pages 88-110

- **Radio Equipment Directive 2014/53/EU (RED)**

Directive of the European Parliament and of the Council of 16 April 2014 on the harmonization of the laws of the member states relating to placing radio equipment on the market; official journal of the EU L153, 22 May 2014, pages 62-106

## **UK Declaration of Conformity**

The UK declaration of conformity is available to all responsible authorities at:

Siemens Aktiengesellschaft

Process Industries and Drives Division, Process Automation DE-76181 Karlsruhe

Germany Importer UK: Siemens plc, Manchester M20 2UR

You can find the current UK Declaration of Conformity for these products on the Internet pages under Siemens Industry Online Support (<https://support.industry.siemens.com/cs/en/en/view/109801531>).

The SIMATIC RTLS products described in this document meet the requirements of the following directives/regulation:

- Radio Equipment Regulations:
- SI 2017/1206 Radio Equipment Regulations 2017, and related amendments
- RoHS Regulations:
- SI 2012/3032 Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, and related amendments

## **RoHS directive (restriction of the use of certain hazardous substances)**

The products described in these operating instructions meet the requirements of the EU directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Applied standard:

- IEC 63000

Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

The products described in this document meet the requirements of the applied standards:

## **Article 3 (1) a) Protection of health and safety**

- EN 62368-1

Equipment for audio/video, information and communication technology – Part 1: Safety requirements

- EN 62311

Assessment of electronic and electrical equipment related to human exposure restrictions in electromagnetic fields (0 Hz – 300 GHz)

The products described in these operating instructions meet the requirements of EU directive 2014/30/EU “Electromagnetic Compatibility” according to the designated standards for the following areas of application.

### **Article 3 (1) b) EMC**

- ETSI EN 301 489-1  
Electromagnetic compatibility and radio spectrum matters (ERM) – Electromagnetic compatibility for radio equipment and services – Part 1: Common technical requirements
- ETSI EN 301 489-17  
Electromagnetic compatibility and radio spectrum matters (ERM) – Electromagnetic compatibility for radio equipment and services – Part 17:
- Specific conditions for broadband data transmission systems  
ETSI EN 301 489-33
- Electromagnetic compatibility and radio spectrum matters (ERM) – Electromagnetic compatibility for radio equipment and services – Part 33:  
Special conditions for ultra-wideband (UWB) devices
- EN 55011  
Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics –Limits and methods of measurement
- EN 55032 Class A, Class B  
Electromagnetic compatibility of multimedia equipment – Emission requirements
- EN 55035  
Electromagnetic compatibility of multimedia equipment – Immunity requirements
- EN 61000-6-1  
Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity for residential, commercial and light-industrial environments
- EN 61000-6-2  
Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments
- EN 61000-6-3  
Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments
- EN 61000-6-4  
Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission standard for industrial environments

### **Article 3 (2) Efficient use of the radio spectrum**

- ETSI EN 300 328  
Wideband transmission systems; Data transmission equipment operating in the 2.4 GHz ISM band and using wide band modulation techniques. Harmonized standard covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU
- ETSI EN 302 065-2  
Short Range Devices (SRD) using ultra-wideband technology (UWB); Harmonized standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 2: Requirements for UWB location

tracking

## FCC information

Siemens SIMATIC RTLS4083T (MLFB 6GT2700-5DC15); FCC ID SCF4083T02

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.

### Caution

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

### Note

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.

### FCC RF radiation exposure statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 7 mm between the radiator and your body.

The device must be carried with the display side facing away from the body. It should be installed and operated with a minimum distance of 7 mm from the antenna to the surface, whereby these 7 mm lie within the device.

### NOTICE

FCC Regulations §15.521 – Technical requirements applicable for all UWB devices.

(a) UWB devices may not be employed for the operation of toys. Operation onboard an air-craft, a ship or a satellite is prohibited.

### EAC (Eurasian Conformity)

Eurasian Economic Union of Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic and the Russian Federation Declaration of conformity according to the technical regulations of the customs union (TR CU)

### ANATEL

Siemens SIMATIC RTLS4083T (MLFB 6GT2700-5DC15); ANATEL 00731-21-09908

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados. Para maiores informações, consulte o site da ANATEL – ([www.anatel.gov.br](http://www.anatel.gov.br))

SIMATIC RTLS4083T

Operating Manual, 02/2024, C79000-G8976-C646-06

## Documents / Resources

