



## MOUNTING INSTRUCTIONS

### **WT 210 Wall Terminal**

**Access control with experience**

## Information for instructions

### Information for the mounting instructions

These instructions make it possible to safely assemble and install the WT 210 wall terminal as constituent of an access control system. The instructions are a constituent of the system, and must be kept in close proximity to the system in a location where they are accessible to the personnel at all times.

The personnel must have carefully read and understood these instructions before starting any work. A basic prerequisite for safe working is adherence to all of the specified safety instructions and handling instructions in these instructions.

The local occupational safety regulations and the general safety regulations for the area of application of the system apply as well.

### Associated documents

As well as these assembly and mounting instructions, the following document is valid for the access control system:

- Power supply delivery documentation
- Dialock 2.0 user manual

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## 1 Overview of the access control system

### Short description

The WT 210 is a compact wall terminal which combines the reader and the control electronics in a compact unit. In combination with an electric door strike the WT 210 forms a complete offline access point.

The design of the WT 210 allows an easy installation in DIN 49073 flush-mount sockets.

The WT 210 has an opto-isolated input. This can be used to connect a pushbutton inside the protected area which directly activates the switch output of the WT 210 for the electric strike.

The WT 210 has a tamper switch, which is triggered when the reader is removed from the mounting frame, and it activates the integrated acoustic signal generator and the alarm relay. The alarm relay can be used to set up a manipulation-proof access point in combination with an additional relay that is installed in the protected area.

All locking events and every removal of the device from the frame are logged in the memory of the WT 210.

The WT 210 has an RF interface through which the terminal can be configured and the audit trail can be read out with the MDU.

### WT 210 Wall Terminal



Fig. 1: WT 210 for installation in flush-mount socket, front view



WT 210 rear view

## 2 Safety

### 2.1 Symbols in these instructions

#### Safety instructions

Safety instructions are marked with symbols in these instructions. The safety instructions are initiated by signal words that indicate the extent of the hazard.



#### **DANGER!**

This combination of symbol and signal word indicates a directly dangerous situation which could lead to death or serious injuries if it is not avoided.



#### **WARNING!**

This combination of symbol and signal word indicates a potentially dangerous situation which could lead to death or serious injuries if it is not avoided.



#### **CAUTION!**

This combination of symbol and signal word indicates a potentially dangerous situation which could lead to slight or minor injuries if it is not avoided.



#### **NOTE!**

This combination of symbol and signal word indicates a potentially dangerous situation which could lead to property damage if it is not avoided.



#### **NOTE!**

This combination of symbol and signal word indicates potential environmental hazards.

## Safety instructions in action instructions

Safety instructions can relate to certain individual directives. Safety instructions such as this are embedded in the directives so that they do not interrupt the flow of reading when performing the action. The signal words that have been described above are used.

Examples:

1.> Loosen screw.

2.>



**CAUTION!**

**Risk of trapping cable at cover!**

Pay attention to the position of the cable. Carefully close cover.

3.> Tighten screws.

## Special safety instructions

The following symbols are used in safety instructions to draw attention to particular dangers:

Warning symbol	Type of danger
	Warning of dangerous electrical voltage
	Warning of a hazardous area

## Tips and recommendations



This symbol highlights useful tips and recommendations and information for efficient and problem-free operation.

## Other markings

The following markings are used in these instructions to highlight action instructions, results, lists, references and other elements:

Marking	Explanation
1.>, 2.>, 3.> ...	Step by step action instructions
⇒	Results of actions
↪	References to sections of these instructions and associated documents
■	Lists without a fixed order
[Pushbutton]	Controls (e.g. buttons, switches), display elements (e.g. signal lamps)

## 2.2 Intended use

The WT 210 is exclusively intended for use in an access control system.

The intended use also includes adherence to all of the specifications in these instructions. Any other type of use is considered as a misuse of the system.



### **WARNING!**

#### **Danger in the event of misuse!**

Misuse of the WT 210 can lead to hazardous situations.

- Never install the WT 210 in potentially explosive areas.
- Never install the WT 210 in other environmental conditions than those that are permitted.



## 2.3 Safety marking

The following labels can be found on one or more components of the access control system. They relate to the immediate environment in which they are affixed.

### Electrical voltage



Only electrical experts are allowed to work on components bearing this marking.  
Unauthorised persons are not permitted to open cabinets bearing this marking.

### Crossed-out waste bin



This picture indicates that the respective component may not be disposed of with the domestic waste.

### Do not touch



Parts may be destroyed if they are touched.

### Lead



The conductor board does not contain any lead.

## 2.4 Residual risks

The components have been designed in accordance with the state of technology and in accordance with the latest safety requirements. Nevertheless, residual risks may still be present that require caution. The residual risks and the resulting actions and measures are listed in the following.

## Electric current



**DANGER!**

### **Risk of fatality due to electric current!**

If you come into contact with live components there is a direct risk of death by electrocution. Damage to the insulation or individual components can put your life at risk.

- Have all work on the electrical system carried out by electric experts.
- In the event of damage to the insulation, switch off power supply immediately and have it repaired.
- Before starting to work on live parts of electrical systems and operating materials, disconnect the system from the mains and secure it against reconnection whilst the work is being carried out. When doing this, pay attention to the 5 safety rules:
  - Disconnect from the mains.
  - Secure against reconnection.
  - Verify that the system is dead.
  - Carry out earthing and short-circuiting.
  - Provide protection from adjacent live parts.
- Never bypass or disable fuses. Adhere to the correct current rate specification when replacing fuses.
- Keep moisture away from live components. It can lead to short circuits.

## 2.5 Operator responsibility

**The operator is the person who operates the access control system for commercial or financial purposes on his own, or allows it to be used by a third party, and bears the legal product responsibility for protecting the user, the personnel or third parties during operation.**

### Operator responsibilities

The access control system is normally used in commercial areas. Thus the operator of the access control system is subject to the legal occupational safety obligations.

In addition to the safety instructions in these instructions, the safety, occupations safety and environmental protection regulations that apply to the area of application of the access control system must be complied with.

The following particularly applies:

- The operator must ensure that escape routes and escape doors are clear for all persons in the event of danger.
- The operator must be familiar with the applicable occupational safety regulations and determine additional hazards that result from the special working conditions at the usage location of the access control system. The operator must implement these in the form of operating instructions for operating the access control system.
- The operator must monitor whether the operating instructions that he has produced are compliant with the latest version of the regulations for the entire usage period of the access control system and adapt them if necessary.
- The operator must clearly define and control the responsibilities for installation, operation, fault correction, maintenance and cleaning.

- The operator must ensure that all persons who handle the access control system have read and understood these instructions. The personnel must also be given training at regular intervals and be notified of the dangers.

The operator is also responsible for ensuring that the access control system is always in technically perfect condition. The following therefore applies:

- The operator must ensure that the maintenance intervals described in these instructions are adhered to.
- The operator must have all safety equipment checked for functionality and completeness at regular intervals.

## 2.6 Personnel requirements

The personnel qualifications listed in the following are specified for the different areas of activity in these instructions:

### Electrical expert

Because of his technical training, knowledge and experience and familiarity with the relevant standards and regulations, the electrical expert is in a position to carry out work on electrical systems and recognise and avoid potential dangers independently.

The electrical expert is specially trained for the working environment in which he works, and is aware of the relevant standards and regulations.

## Basic requirements

Only persons who can be expected to carry out their work reliably are permitted as personnel. Persons whose reaction capability is influenced by drugs, alcohol or medication, for example, are not permitted.

Attention must be paid to the age and profession-specific regulations at the deployment location when selecting personnel.

## Unauthorised persons



### WARNING!

#### **Risk of fatality for unauthorised persons from hazards in the danger area and the working area!**

Unauthorised persons who do not fulfil the requirements described here are not aware of the dangers in the working area. For this reason, unauthorised persons are at risk of serious injury or even death.

- Keep unauthorised persons away from the danger and working area.
- If in doubt, speak to the person and send them out of the danger and working area.
- Stop working until unauthorised persons have left the danger and working area.

## 2.7 Protecting the environment



### NOTE!

#### **Danger to the environment from erroneous handling of substances that can damage the environment!**

If substances that can damage the environment are handled in the wrong way, particularly if they are not disposed of correctly, considerable damage can be caused to the environment.

- The instructions for handling substances that damage the environment and the disposal thereof that are mentioned below must be complied with at all times.
- If substances that damage the environment are accidentally released into the environment, suitable measures must be taken immediately. In case of doubt, the responsible local authority must be notified about the damage and consulted about suitable measures to be taken.

**The following environmentally damaging substances are used:**

### Electric and electronic components

Electric and electronic components can contain toxic materials. These components must be collected separately and handed in to local authority collection points or disposed of by a specialist company.

## 3 Function description

### 3.1 Function of the access control system

The access control system consists of the WT 210 wall terminal with an external power supply, a connected electric or electro-mechanic opening device like anelectric strike, and the configuration software.

The settings of the WT 210, which are made in the configuration software, are transmitted to the WT 210 using the MDU 110 mobile data transfer unit.

Audit trails are also read out from the WT 210 using the MDU 110 so that they can be loaded into the software of the administrator's PC and processed.

Other components such as a door strike pushbutton can also be connected to the WT 210.

Among others, the following configuration examples are possible:

- One door with a WT 210, electric door strike and pushbutton on the inside  
 ↳ Chapter 3.4.1 “Installation version 1: Door with WT 210, electric strike ” on page 37
- A door with a WT 210, electric door strike and protection against tampering  
 ↳ Chapter 3.4.2 “Installation version 2: Door with WT 210, electric strike and sabotage protection” on page 38

### 3.2 WT 210 pin assignments

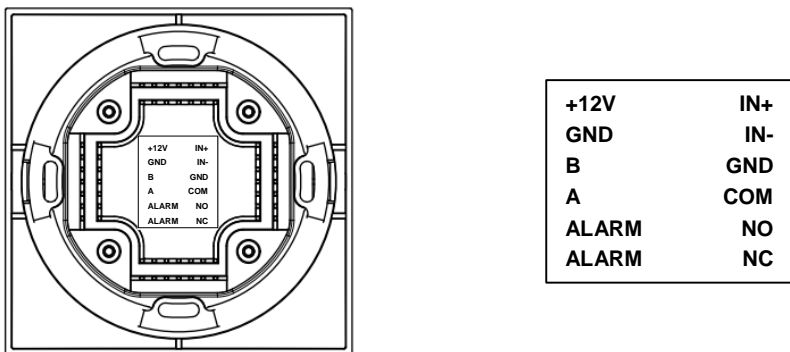


Figure 2 WT 210 connection assignments

Connection	Use
+12V, GND	Power supply 12 VDC – 24 VDC
A, B	RS 485
ALARM	Alarm output, NC
IN+, IN-	Gate input, 5 – 24V, 20mA max.
NC, NO, COM	Relay output, changeover contact

### 3.3 Recommended power supply

Input voltage: 100 – 240 VAC  
 Output voltage: 12 VDC  
 Output current 2A max.  
 Short circuit protected  
 Width: 36mm  
 Height: 94mm  
 Depth: 68mm  
 Can be fitted to DIN top hat rail  
 Cat. No. 917.93.013



### 3.4 Installation versions

#### 3.4.1 Installation version 1: Door with WT 210, electric strike and pushbutton on the inside

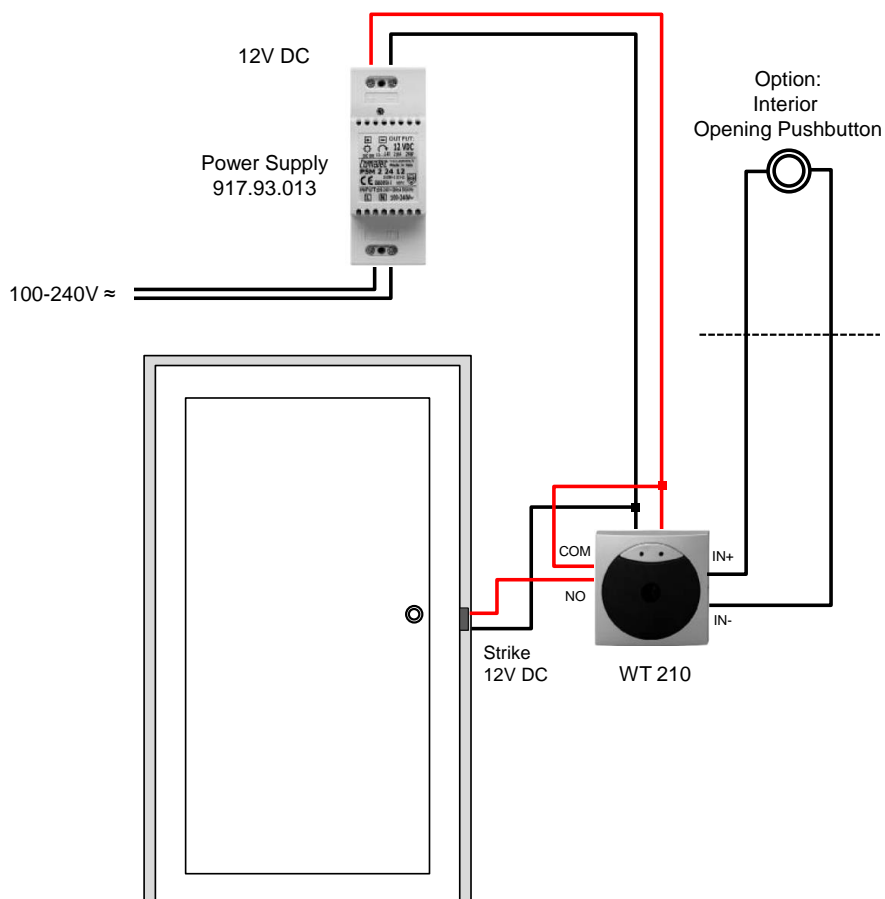


Fig. 2: Installation example 1

### 3.4.2 Installation version 2: Door with WT 210, electric strike and sabotage protection

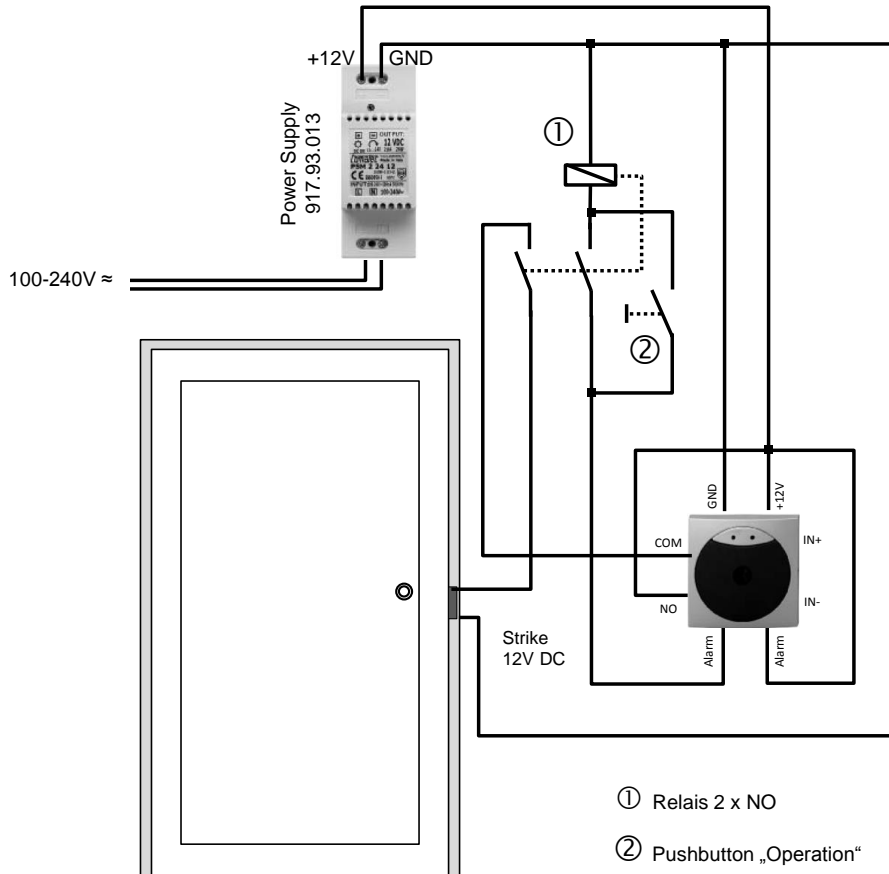


Fig 3 Installation example 2

As soon as the reader is removed from the frame, an alarm is triggered in the terminal. The external relay interrupts the electrical connection to the electric door strike, so that the door cannot be opened. Operation can only be resumed by using the pushbutton (2).

### 3.4.3 Front view of WT 210

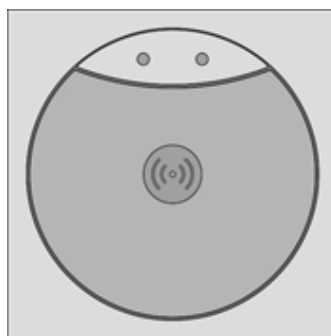


Fig. 4: WT 210 front of (with frame)

## 4 Assembly and installation

### 4.1 Installation location requirements

- Ambient conditions must be complied with ↪ *Chapter 2.2*
- Connecting cables for connecting the various components must be in place.
- The line voltage must comply with the specifications of the power supply being used. For further information observe the power supply's operating instructions.
- Customer-provided power cable type: 0,13 – 0,52 mm<sup>2</sup>

### 4.2 Assembly and installation of the WT 210

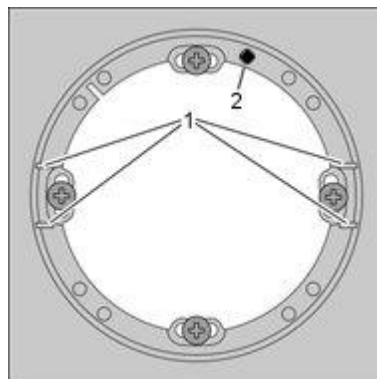
Personnel: ■ Electrical expert

Requirements:

- There is a pre-installed DIN 49703 switch box in the wall at the required installation location.
- The cable for the power supply, the cable to the electric strike and for the optional pushbutton have already been routed.

1.> Disconnect power at the mains end.

2.> Screw frame of WT 210 to the pre-installed switch box. Make sure that the support rails (1) for the terminal are on the right and left, and that the black marking (2) is above.



*Fig. 5 Frame, front view with top marking*



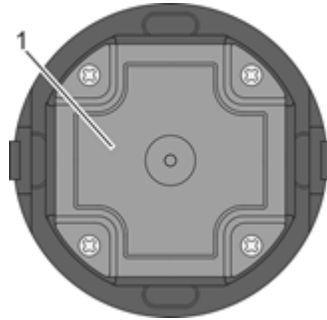


Fig. 6: Rear cover

3. Unscrew and remove rear cover of the terminal (Fig. 6).

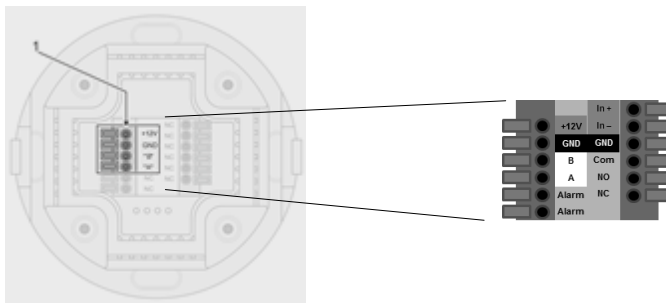


Fig. 7: Clamp terminal block at rear of the WT 210

- 4.> Connect cables to terminal clamps

**i** Ensure correct polarity of the supply voltage.

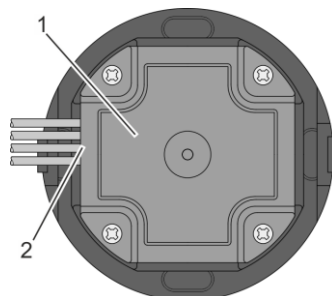


Fig. 8: Rear of the WT 210 with cable

- 5.> Screw rear cover back to WT 210 (Fig. 8/1). When doing this, lead out the cables sideways at the padded cable ducts (Fig. 8/2).

6.> **!** **NOTE! Risk of damage to cables!**

Carefully slide terminal module and cables into the switch box. Ensure that cables are not jammed.

7.> Push terminal module (LEDs upwards) into the frame until it snaps into the lateral notches of the frame.

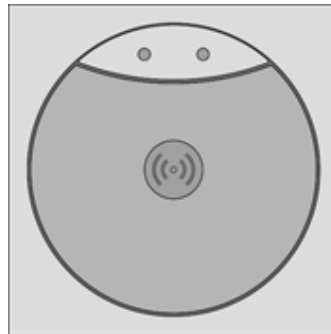


Fig. 9 WT 210 with frame

8.> Restore power supply of WT 210.

## 4.3 After installation

1.Connect power supply

2.Check operation.



**The installation has been carried out correctly if the following points apply:**

- Red LED shines



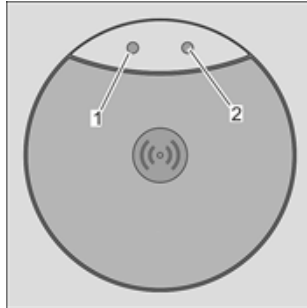
### **Configuration and initial start-up**

*The system configuration and the configuration of the WT 210 take place via the Dialock software, and are carried out by the system supplier customer service department.  
The initial start-up of the access control system is also carried out by the system supplier customer service department.*



*For more information about starting up and configuring the overall system, see Dialock 2.0 user manual.*

## 4.4 Indicators of the WT 210



*Fig. 9: Overview of WT 210 LEDs*

- 1 LED 1 shines green if access is granted
- 2 LED 2 shines red if the WT 210 is in operation

## 5 Dismantling, disposal

### 5.1 Safety instructions pertaining to dismantling/disposal



**DANGER!**

**Risk of fatality due to electric current!**

There is a risk of fatality in the event of contact with live components.

- Before starting dismantling, switch off and permanently disconnect the power supply.

### 5.2 Dismantling

Before starting dismantling

- Physically disconnect entire power supply, discharge residual energy.
- Disconnect interconnecting cables between the components.

### 5.3 Disposal



**NOTE!**

**Danger to environment from incorrect disposal!**

The environment could be put at risk if disposal is not carried out correctly.

- Have electrical scrap and electronic components disposed of by certified specialist companies.
- In case of doubt, obtain information about environmentally friendly disposal from the local authority or dedicated specialist disposal companies.

If no return or disposal agreement exists, take dismantled components for recycling:

- Scrap all metals.
- Send plastic components for recycling.
- Sort other components according to material type prior to disposal.

## 6 Technical data

### Packing unit storage

Store packing units under the following conditions:

- Do not store outside.
- Store in a dry and dust-free place.
- Avoid contact with aggressive media.
- Protect from direct sunlight.
- Avoid mechanical vibration.
- Storage temperature: -25 to +70 °C
- Relative humidity: max. 90 %, non-condensing



*The packing units may contain information about storage that goes beyond the requirements mentioned in this document. Please adhere to these additional requirements accordingly.*

### Connection and rating values

Specification	Value	Unit
Voltage	12 - 24	VDC
Tolerance	± 15	%
Current consumption, maximum	0.125	A
Power consumption, maximum	3	W
Fuse protection	1	A
Cable type (all clamps)	0.13 – 0.52	mm <sup>2</sup>

### Ambient conditions during operation

Specification	Value	Unit
Temperature range	-25 – +70	°C
Relative humidity, maximum (non-condensing)	95	%

## 6.1 Mechanical dimensions WT 210

### Dimension sheet

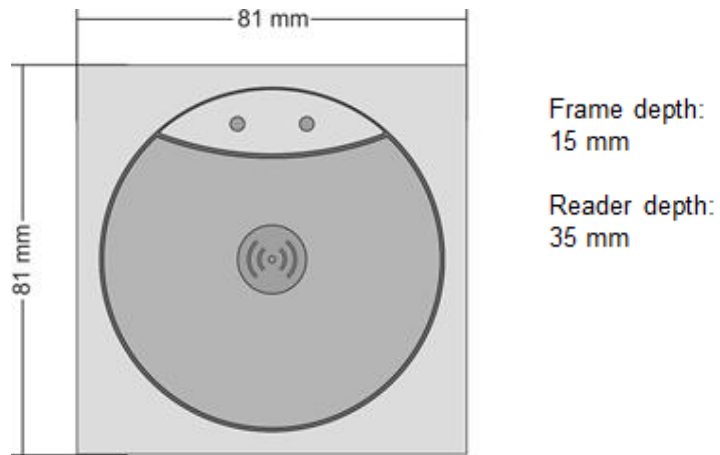


Fig. 10: Dimension sheet, WT 210 with frame

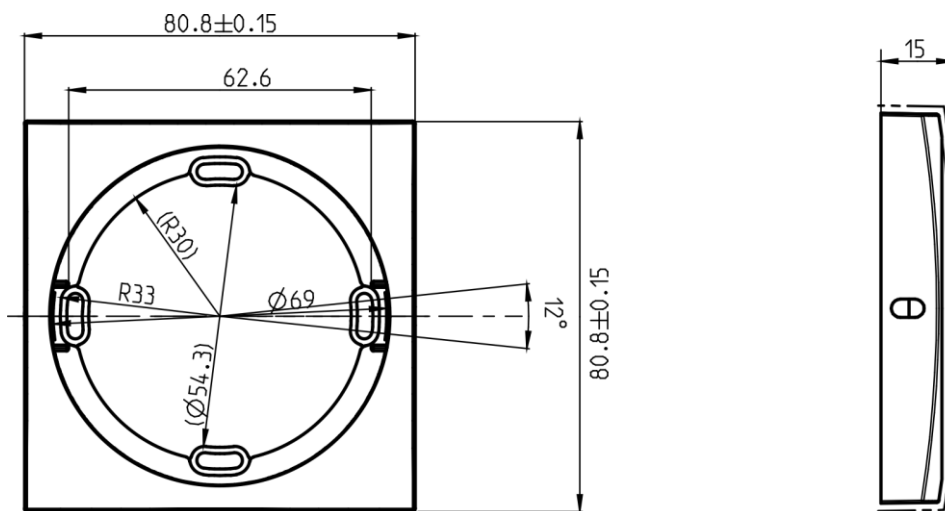


Fig. 3: Dimensions sheet for frame (top-down view and side view)

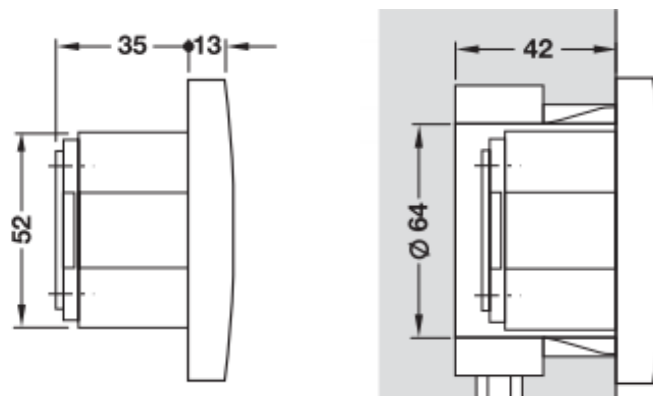


Fig 12 WT 210 side view

Pay attention to installation depth!!

## Dimensions and weight

Specification	Value	Unit
Weight (with frame)	85	g
Width	81	mm
Height	81	mm
Depth	15 + 35	mm

## **7 Appendix**

### **A FAQs**



This equipment has been tested and found to comply with the limit 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 interferences to radio communications. However, there is no guarantee that 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 interferences 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

**NOTICE:**

*This device complies with Part 15 of the FCC Rules [and with Industry Canada licence-exempt RSS standard(s)].*

*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.*

**Notice:**

*Changes or modifications made to this equipment not expressly approved by (manufacturer name) may void the FCC authorization to operate this equipment*

**NOTE:**

*Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.*

*L'exploitation est autorisée aux deux conditions suivantes:*

- (1) l'appareil ne doit pas produire de brouillage, et*
- (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

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