NurseCall N46 Wall Transmitter

N46_UM_EN_970.030_V1.1_2017.04

TeleAlarm®
swiss design

en User manual

Table of Contents

1 Identification

1.1 Document

Name	No.
User Manual	970.030

Table 1-1: Document No.

Version	Description
v1.1_2017.04	First Edition

Table 1-2: Version Management

1.2 Customer support addresses

CH

TeleAlarm SA
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2300 La Chaux-de-Fonds
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8307 Effretikon
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TeleAlarm SA
Rue du Pont 23
2300 La Chaux-de-Fonds
Switzerland
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DE
EN

TeleAlarm Europe GmbH
Hertzstraße 2
04329 Leipzig
Germany
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TeleAlarm Europe GmbH - Office Benelux
Kaldenkerkerweg 20
5913 AE Venlo
Netherlands
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info-be@telealarm.com

2 Generalities

2.1 NurseCall System

Alarms and Messages arriving from NurseCall Transmitters such as the NurseCall N46 Wall Transmitter are managed and stored by the NurseCall Main Unit.

NOTICE!
The document "NurseCall General Overview" explains the system concept.

2.2 NurseCall N46 Wall Transmitter

The NurseCall N46 Wall Transmitter is a multifunction terminal radio transmitter, designed for patients and nursing staff to make an emergency call, summon assistance or cancel a call directly in the patient’s room. It is part of a NurseCall system, and is easily expandable.

In the NurseCall system, the NurseCall N46 Wall Transmitter allows the resident of a home or the patient of a clinic to easily alert the care personnel if needed. The patient simply has to push the large red button. The system is then able to control and to monitor the progress of the care personnel.

The alarm and event transmission is performed by radio. There is no need for a wired connection between the NurseCall N46 Wall Transmitter and the NurseCall Main Unit, this makes the system installation easy and allows great mobility.

Depending on the model, two relay outputs are available and may be used to connect alarm and staff presence indicators such as, for instance, the signal lamps installed above the door.

Two LED signal lamps allow the progress to be monitored on the device.

In this document you will find all the information you need for the installation and the use of the NurseCall N46 Wall Transmitter.

3 Safety Instructions

WARNING!
The User / Installer should read and understand this chapter before any intervention on the NurseCall N46 Wall Transmitter.

3.1 Introduction

3.1.1 Principle

NOTICE!
In case of unclear information, please contact your local representative.

3.1.2 Importance of safety instructions

Each safety and protection instruction in this manual must be adhered to in order to avoid personnel injuries, property damages or environmental pollution.
In a similar manner, the legal bylaws, the measures in prevention of accidents and for the protection of the environment, as well as the recognized technical rules aiming at appropriate and safe working conditions which as applied in the country and at the place of use of the NurseCall N46 Wall Transmitter must be adhered to.

3.1.3 Disregarding safety rules

Disregarding the safety rules, as well as existing legal and technical regulations, may lead to accidents, to property damages or to environmental pollution.

3.2 Environmental conditions

WARNING!
The NurseCall N46 Wall Transmitter must not be located near a water tap or any other source of water.
The electrical safety of the NurseCall N46 Wall Transmitter is only guaranteed if the electrical installation is in accordance with the national regulations and if this installation works properly.
The NurseCall N46 Wall Transmitter may not be used in buildings prone to fire and explosion hazards.

CAUTION!

The NurseCall N46 Wall Transmitter may not be used under exposure to the direct sunlight, to heat, to dust or to an excessive humidity (only use the equipment in a clean environment).

► Install the NurseCall N46 Wall Transmitter in a dry place, away from any source of heat.

CAUTION!

Interferences

Avoid immediate proximity to other electric devices such as a television.

3.3 General safety instructions

DANGER!

Electrocution

During maintenance operations, when the NurseCall N46 Wall Transmitter is powered and its casing is removed, the NurseCall N46 Wall Transmitter may not be left unattended.

CAUTION!

The NurseCall N46 Wall Transmitter may only be connected to the electrical sources as described in *Section 5.2 Installation, Page 15*.

CAUTION!

Maintenance and repairs may only be performed in accordance with the instructions and by authorized technical personnel only.

The sole possession of the User Manual does not allow the personnel to perform any kind of repair on the NurseCall N46 Wall Transmitter.

Take into account all the warnings and follow all the instructions displayed on the NurseCall N46 Wall Transmitter and those which are printed in the documentation.

Never try to use replacement pieces other than those authorized by the manufacturer of the NurseCall N46 Wall Transmitter.

CAUTION!

It is mandatory to use the products specified in the present User Manual to clean the NurseCall N46 Wall Transmitter. If you plan to use another product, only do so after having obtained the authorization of the manufacturer.

WARNING!

Electro Static Discharge

The NurseCall N46 Wall Transmitter contains highly sensitive electronic components. It should be opened only in an **ESD** protected environment with respect to the following precautions:

- ► Discharge yourself from electrostatic loads by touching a grounded conductive surface before opening the unit.
- ► Avoid touching conductive parts inside the NurseCall N46 Wall Transmitter if not absolutely necessary.

CAUTION!

Never let any liquid enter the system. In case of liquid spill inside the NurseCall N46 Wall Transmitter, act immediately as follows:

1. Switch off the NurseCall N46 Wall Transmitter by taking out the battery or removing the power supply.
2. Dry up the NurseCall N46 Wall Transmitter.
3. Clean the NurseCall N46 Wall Transmitter.
4. Check its electrical functions.

NOTICE!

For further information, please contact your local representative.

3.3.1 Observation and information

In case of defective operation or any other technical incident for which no remedy is described in this manual, please contact immediately your local representative.

3.4 Special safety instructions

Appropriate safety instructions linked to specific risks are described in the corresponding section of this manual.

4 Description

4.1 General description

4.1.1 Top view

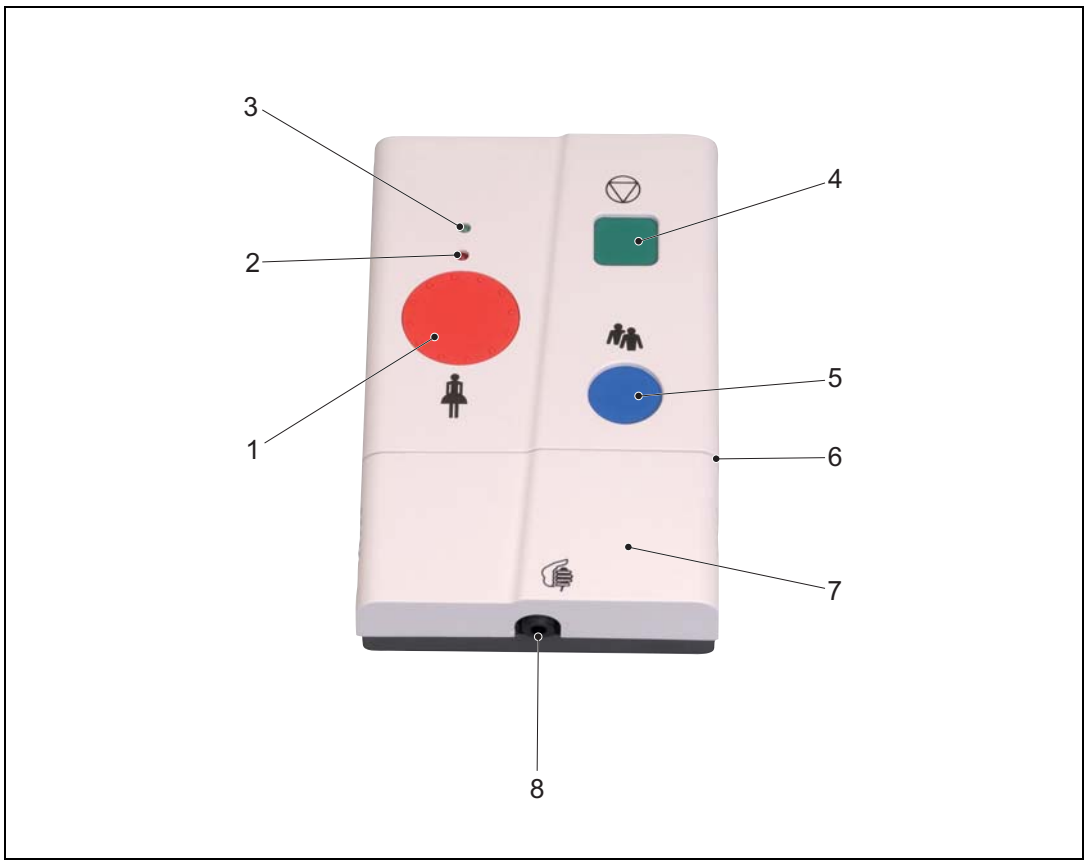


Fig. 4-1: Top view

1. **Red** emergency call button
2. LED indicator for alarm
3. LED indicator for presence
4. **Green** acknowledgment button, to acknowledge an alarm locally
5. **Blue** assistance call button
6. Socket for coded key insertion (option)
7. Installation compartment
8. Jack plug for pear-push button

4.2 Main functions

The main function of the NurseCall N46 Wall Transmitter is to enable easier handling of emergencies and help, directly from the patient's room.

4.2.1 Red emergency call button

Its large red button with textured surface makes it easy to identify and to press, launching an emergency call.

4.2.2 Blue assistance call button

If, upon arriving, nursing staff requires additional help, a call for assistance can be sent by pressing the round blue button.

4.2.3 Green acknowledgment button

In all cases, there is an automatic call repetition until cancel of the call. Cancelling can be made directly on the room transmitter with the smaller green button.

4.2.4 Alarm signaling

The presence and alarm LED indicators enhance the signaling of alarms.

The NurseCall N46 Wall Transmitter is easily expandable, as a socket for pear-push button is directly accessible.

4.3 Options

Two main options can be implemented in the NurseCall N46 Wall Transmitter: Identification of the nurse group and relay contacts for external signals.

4.3.1 Identification of the nurse group

This can be made via a socket for coded presence plugs (max. 4 different), allowing the use of programmable function keys to log on and log off.

4.3.2 Relay contacts for external signals

Optionally, relay contacts for room signal lights and connecting ports for wired room installation can be used.

5 Installation

5.1 Unpacking

The NurseCall N46 Wall Transmitter is carefully packed for transportation.
The components contained in the box are protected, but should be handled with care.
Store the packaging material for further use (storage or transport).

NOTICE!
In case of defective or missing equipment, do not try to install the NurseCall N46 Wall Transmitter. Contact immediately your local representative.

1. Take all components out of the box and place the NurseCall N46 Wall Transmitter on the working space.
2. Check each component in the box, in accordance with the list of contents below.
3. Check that the NurseCall N46 Wall Transmitter and its accessories have not been damaged during transportation.

5.1.1 List of contents

Reference	Description
RM.905.FI RM.906.FI	NurseCall N46 Wall Transmitter
2 screws	
2 screw anchors	
1 CR2450 3V Lithium battery	
970.030	NurseCall N46 Wall Transmitter User Manual

Table 5-1: Packing list

5.2 Installation

5.2.1 Generalities

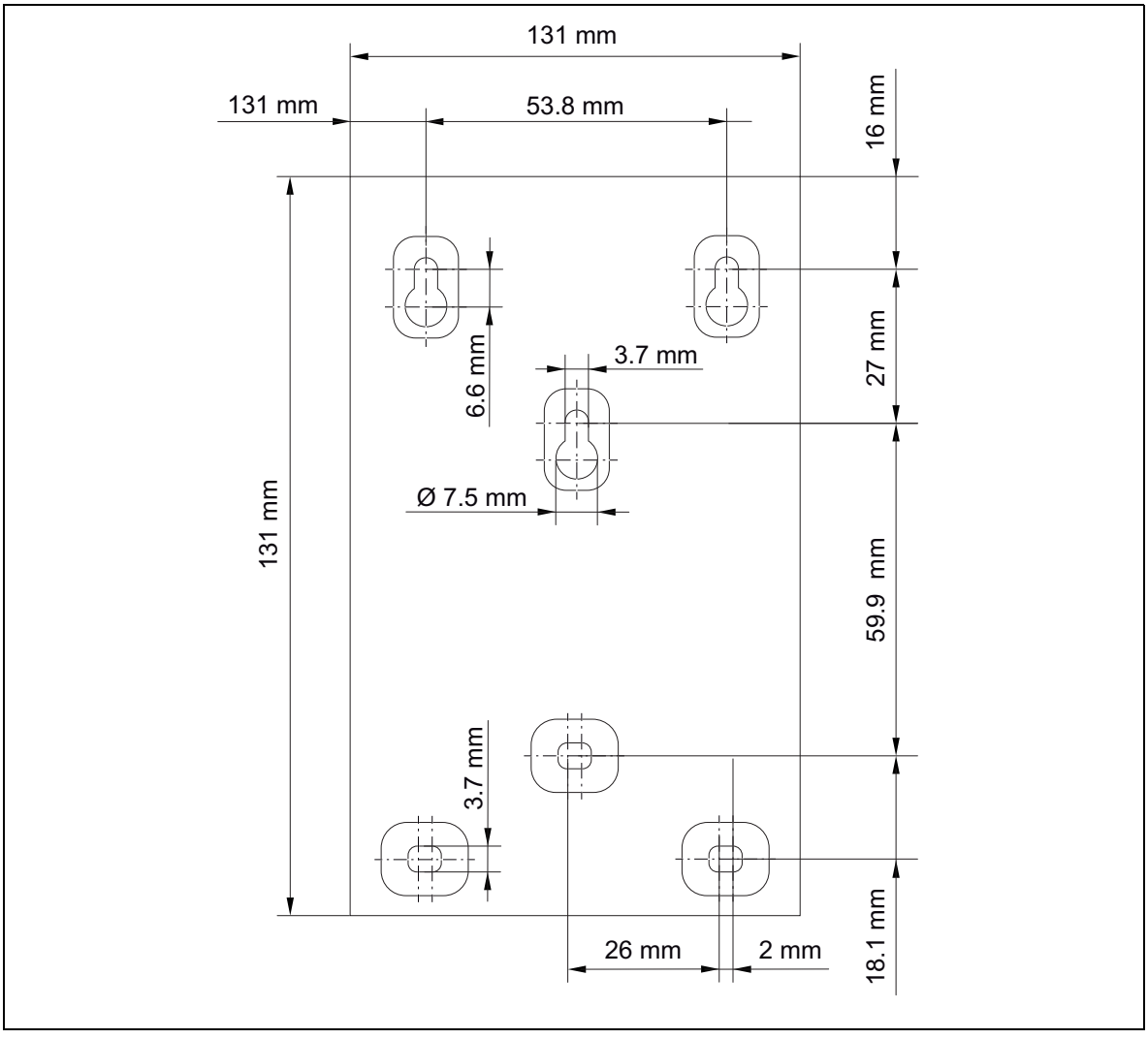
► Install the NurseCall N46 Wall Transmitter in a dry place, away from any source of heat.

CAUTION!
Interferences
Avoid immediate proximity to other electric devices such as a television.

5.2.2 Wall installation

The NurseCall N46 Wall Transmitter can be fixed with two to five screws on a wall. Two holes at 60 mm interval are provided for direct mounting on connection boxes.
The three upper holes are used for positioning the device and cannot be reached from the installation compartment.

Two of the lower holes can be reached from outside and thus used for fixing the device.



5.2.3 Connecting to the power supply

The NurseCall N46 Wall Transmitter can be powered by a lithium battery or/and an external 12-24 VDC power supply. If the device is powered with an external power supply, the battery is not necessary, but it can be used as a backup power supply in case of power loss.

If the device is powered by the battery only, the battery life is about 2 years. However, it is recommended to change the battery once a year.

If the device is powered by an external power supply and the battery is used as backup power supply, it is recommended to check it at regular intervals (for instance once a year) and to change it if necessary.

CAUTION!

When powering the device, the external 12-24 VDC power supply must be equipped with a setting off safety device, that is easy to access. The power supply must also be equipped with a safety fuse of lower value, e.g. 100 or 125 mA.

5.2.4 Reset

All parameters are reset when powering up the device (battery or external power supply). This operation causes the synchronization of the daily message.
In order to perform a reset, make sure to remove both the battery and the external power supply, make a short-circuit on the two pins marked **Reset** before powering the device up again. See *Section Fig. 5-1: Replacing the battery, Page 17*

NOTICE!

All connections as well as the configuration need to be carried out before powering the device (insertion of the battery and/or application of the external power supply).

5.2.5 Transmitter Identification

All NurseCall N46 Wall Transmitters are provided with their own radio identification code that is assigned in the factory. During the installation, it is necessary to set the relationship between the identification code of the Transmitter and the place where it is installed (floor/ room/bed or single number). This identification is programmed on the Nursecall Main Unit (refer to the NurseCall Main Unit User Manual).

5.2.6 Operation Check

Once the transmitter has been installed and setup properly, it is recommended to check all functionalities of the device. The radio transmission can be checked by sending an acknowledgement call by pressing the green button.

5.2.7 Replacing the battery

WARNING!

- May explode if exposed to fire;
- Use only original batteries intended for use with your NurseCall N46 Wall Transmitter. Using other type of batteries could be dangerous;
- Do not expose the battery to liquids;
- Do not let the metal contacts on the battery touch another metal. This could damage the battery;
- Do not disassemble or modify the battery;
- Do not expose the battery to extreme temperatures, and never above 60 ºC (+140 ºF).
- For maximum battery capacity, use the battery at room temperature;
- Keep out of reach of children;
- Use the battery for the intended purpose only;
- Do not allow the battery to be put into the mouth. Battery electrolytes may be toxic if swallowed.

CAUTION!

There is a risk of explosion if battery is replaced by a wrong type or if not connected correctly.
The battery should be replaced exclusively by Authorized Personnel.
Dispose of used batteries according to instructions and regulations.

Battery type is 3V CR2450/DL2450.

Procedure

1. Open the compartment cover (1) by sliding it downwards and then towards you.
2. Carefully remove the used battery (2).
3. Place the new battery. The positive terminal must be facing you.
4. Replace the compartment cover.

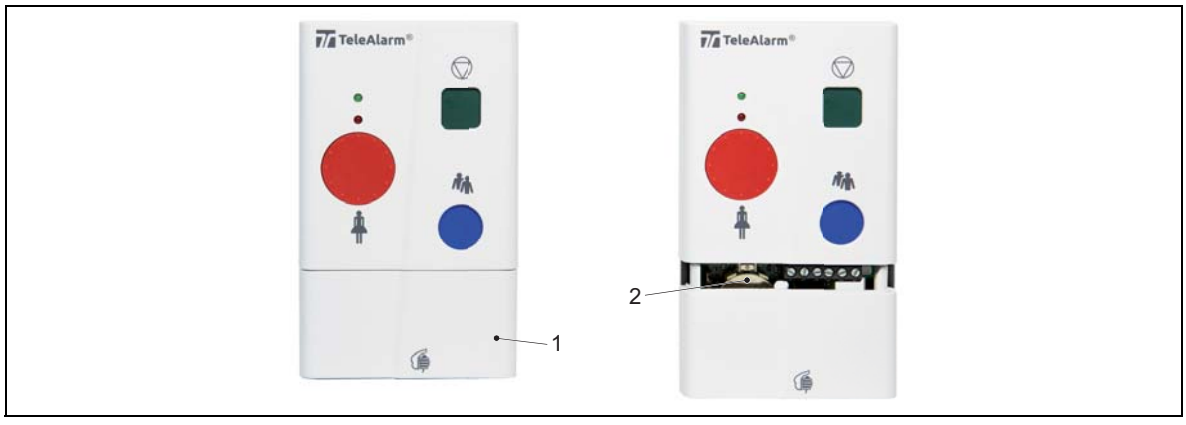


Fig. 5-1: Replacing the battery

5.2.8 Configuration and Wiring

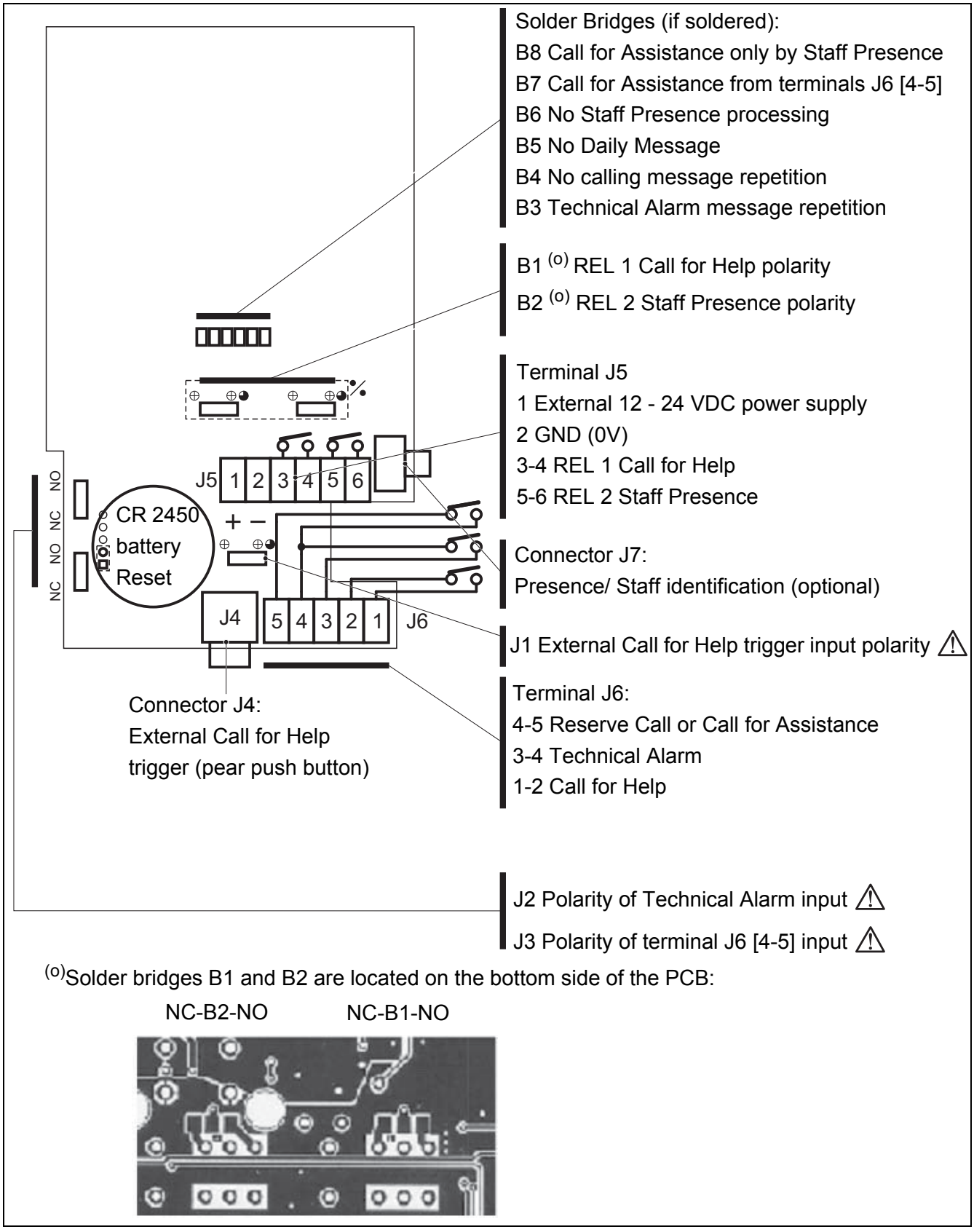


Fig. 5-2: Configuration and Wiring

NOTICE!
Setting up one or more inputs to "NC" position results to higher power consumption. This configuration should be used with external power supply or will reduce the battery life.

5.3 Inputs and Outputs

5.3.1 General inputs

The * marks a factory setting.

External trigger	J4	Jack 3.5 mm	J1	NO*	Closing contact causes a Call for Help
				NC	Contact opening causes a Call for Help
Power supply	J5	1		+	12 to 24 V DC
		2		-	GND 0V

5.3.2 Wired Outputs

Call for Help Relay	J5	3-4	B1	NO*	A Call for Help causes the closing of the relay contact
				NC	A Call for Help causes the opening of the relay contact
Staff Presence Relay	J5	5-6	B2	NO*	Staff Presence signaling causes the closing of the relay
				NC	Staff Presence signaling causes the opening of the relay

5.3.3 Wired Inputs

Call for Help	J6	1-2			The contact closing causes a Call for Help.
Technical Alarm	J6	3-4	J2	NO*	The contact closing causes a Technical Alarm
				NC	The contact opening causes a Technical Alarm
Reserve Call or Call for Assistance	J6	4-5	J3	NO*	The contact closing causes a Reserve Call or a Call for Assistance
				NC	The contact opening causes a Reserve Call or a Call for Assistance

5.3.4 General configuration

The * marks a factory setting.

Bridge	State	Function
B3	Open	Technical Alarms are not repeated.
	Soldered*	Technical Alarms are repeated until alarm acknowledgement (max 20 min.)
B4	Open*	Calls (except technical alarms) are repeated until call acknowledgement (max 20 minutes)
	Soldered	Calls (except technical alarms) are not repeated.
B5	Open*	A daily message is sent every 24 hours.
	Soldered	Daily messages are suppressed.
B6	Open(o)	Staff Presence Processing is activated.
	Soldered(o)	Staff Presence Processing is disabled.
B7	Open*	Activation of J6 [4-5] terminal input causes a Reserve Call.
	Soldered	Activation of J6 [4-5] terminal input causes a Call for Assistance.
B8	Open*	The Assistance Call does not depend on the presence of the Care Personnel.
	Soldered	The Assistance Call is possible only if the Care Personnel has signaled his/her presence.

(o) NurseCall N46 Wall Transmitters that feature the output relays are delivered with the Staff Presence Processing activated (B6 open). Models that do not feature the output relays are delivered with the Staff Presence Processing disabled (B6 soldered).

6 Use

Every time a NurseCall N46 Wall Transmitter is used by pressing a button or activating a wired input, the device sends a radio signal and the lamps indicates its actual state. Optionally, two relays allow the transmission of status to a remote display such as the signal lamps placed on top of the door.

Each radio message is sent with a different code which allows the receiver (NurseCall system) to recognize the performed action.

NOTICE!
It is recommended to keep the button pressed until the lamp placed above the red button lights up.

6.1 Call for Help

The Call for Help can be triggered in three different ways:

- by pushing the red Call for Help button
- by pushing the external switch connected to the J4 connector, for example a pear push button.
- by pushing the external button connected to terminals 1 & 2 of the terminal block J6.

The Call for Help is repeated approximately every 2 minutes until a call acknowledgement takes place, up to a maximum of 20 minutes. This repeat function can be disabled by setting the solder bridge B4.

A Call for Help is signaled by red flashes on the signal lamp and optionally, by the activation of the relay Call for Help.

NOTICE!
In some cases, the action Call for Help generates a Call for Assistance action. See *Section State before action: Alarm with staff presence, Page 26*.

6.2 Call for Assistance

The Call for Assistance is triggered by pushing the Call for Assistance button (blue).

The Call for Assistance is repeated approximately every 2 minutes until a call acknowledgement takes place, up to a maximum of 20 minutes. This repeat function can be disabled by setting the solder bridge B4.

A Call for Assistance is signaled by red double flashes on the signal lamp and by the alternate action/release of the relay Call for Help.

6.3 Call Acknowledgement (Staff Presence)

The call acknowledgement is triggered by pushing the Acknowledgement button (green).

The call acknowledgement stops immediately all repetitions of the calls.

Optionally, a call acknowledgement triggers the Staff Presence signal:
– by green flashes on the signal lamp and by activating the Staff Presence relay when the Caregiver pushes the Acknowledgement button when entering the room.
– by switching off the lamp and releasing the Staff Presence relay when the Caregiver pushes the Acknowledgement button and leaves the room.

6.4 Reserve call

The reserve call is triggered by pushing the external button connected to terminals 4 and 5 of the terminal block J6.

The call can be triggered by closing (NO) or opening (NC) the contact.

The reserve call is repeated about every 2 minutes until a call acknowledgement takes place, up to a maximum of 20 minutes. This repeat function can be disabled by setting the solder bridge B4.

The reserve call is signaled in the same way as the Call for Help on the signal lamp and the relays.

6.5 Technical Alarm

The Technical Alarm is triggered by activating the contact connected to terminals 3 and 4 of the terminal block J6.

The alarm can be triggered by closing (NO) or opening (NC) the contact 3.

Normally, the Technical Alarm is repeated about every 2 minutes until a call acknowledgement takes place, up to a maximum of 20 minutes, but it is possible to deactivate the repetition of the technical alarms by opening the solder bridge B3. In this case, the Technical Alarm is not repeated.

The Technical Alarm is signaled in the same way as the Call for Help on the signal lamp and the relays.

6.6 Caregiver Arrival

The Caregiver Arrival message is triggered when the Caregiver inserts the coded key in the connector on the side of the housing (J7), when entering the room. This message will appear if the optional coded key function is available on the device.

Up to four categories of Caregivers may be identified by using different keys.

The Caregiver Arrival message is not repeated.

Insertion of the coded key is signaled by green flashes on the signal lamp and by activating the Staff Presence relay.

6.7 Caregiver Departure

The Caregiver Departure message is triggered when the Caregiver removes the coded key from the housing, when leaving the room.

The Caregiver Departure message is not repeated.

Removing the coded key is signaled by switching off the green flashes on the signal lamp and by releasing the Staff Presence relay.

6.8 Daily Message and Battery Low Message

The radio transmission can be checked by way of the daily message which is automatically sent about every 24 hours. When the battery voltage is too low, the daily message is replaced by a Battery Low message.

The transmission of the Daily Message can be disabled by setting the solder bridge B5 (this does not influence the transmission of the Battery Low message).

6.9 Error Message

The Error Message is sent every 2 minutes if the device has detected a general dysfunction, or if one of the following triggering devices remains in its activated position for up to 4 minutes:

- Call for Help
- Acknowledgement button
- Call for Assistance
- Reserve Call

NOTICE!
The device connected to the Technical Alarm input is allowed to remain in the activated position; without transmission of the Error Message.

7 Operation

7.1 Description of the six different states

During operation, the NurseCall N46 Wall Transmitter can be set to one of six following states:

State	Description
Stand-by	No call is being processed.
Alarm without staff presence	The patient has triggered a Call for Help but the Care Personnel has not yet responded.
Alarm with staff presence	The Care Personnel has responded after a Call for Help.
Assistance without staff presence	A Call for Assistance has been triggered without the presence of the Care Personnel.
Assistance with staff presence	A Call for Assistance has been triggered in the presence of the Care Personnel.
Staff Presence without alarm	The Care Personnel has responded without a previous call from the patient.

Each state is indicated by the signal lamp and by a special position of the output relays.

It is possible to configure the NurseCall N46 Wall Transmitter in order that:
– the Call for Assistance can be triggered only if the Care Personnel is present.
– the device does not manage the Staff Presence. This mode makes sense only if the output relays are not provided or not used.

The transition to a specific condition depends on the device configuration, of its actual condition and of the action completed; as shown on the charts in the following chapters.

NOTICE!
When the NurseCall N46 Wall Transmitter is powered by an external power supply, the signal lamps follow the state of the corresponding relay outputs.

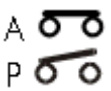
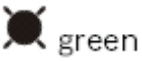
7.2 Legend of illustrations

Legend	Description
	The contact of the Call for Help relay is closed
	The contact of the Call for Help relay is open
	The contact of the Call for Help relay opens and closes alternately
	The contact of the Staff Presence relay is closed
	The contact of the Staff Presence relay is open
	The signal lamps are off
	A signal lamp lights up in the indicated color
	A signal lamp flashes in the indicated color
	A signal lamp flashes quickly in the indicated color

7.3 Operation with the staff presence processing activated

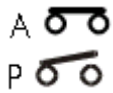
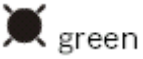
7.3.1 Device behavior when pressing a button

State before action: Stand-by

Action	State	Relay contact	Signal lamp	Radio Message
	Stand-by			(none)
Call for Help	Alarm without staff presence			Call for Help
Call Acknowledgement	Staff presence without alarm			Acknowledgement
Call for Assistance	Assistance without staff presence **			Call for Assistance

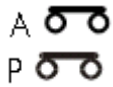
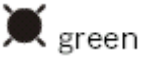
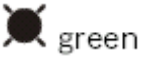
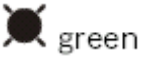
** If the function Assistance only in case of Staff Presence is activated and the NurseCall N46 Wall Transmitter is not in Staff presence state, the Call for Assistance causes a state Alarm without Staff Presence and a Call for Help radio message.

State before action: Alarm without staff presence

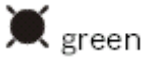
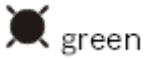
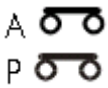
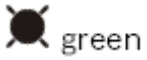
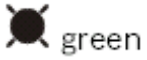
Action	State	Relay contact	Signal lamp	Radio Message
	Alarm without staff presence			(none)
Call for Help	Alarm without staff presence (unchanged)			Call for Help
Call Acknowledgement	Alarm with staff presence			Acknowledgement
Call for Assistance	Assistance without staff presence **			Call for Assistance

**If the function Assistance only in case of Staff Presence is activated and the NurseCall N46 Wall Transmitter is not in Staff presence state, the Call for Assistance causes a state Alarm without Staff Presence and a Call for Help radio message.

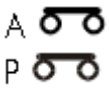
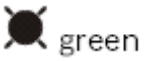
State before action: Alarm with staff presence

Action	State	Relay contact	Signal lamp	Radio Message
	Alarm with staff presence			(none)
Call for Help	Assistance with staff presence			Call for Assistance
Call Acknowledgement	Stand-by			Acknowledgement
Call for Assistance	Assistance with staff presence			Call for Assistance

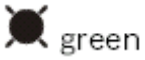
State before action: Assistance with staff presence

Action	State	Relay contact	Signal lamp	Radio Message
	Assistance with staff presence			(none)
Call for Help	Assistance with staff presence (unchanged)			Call for Assistance
Call Acknowledgement	Alarm with staff presence			Acknowledgement
Call for Assistance	Assistance with staff presence			Call for Assistance

State before action: Assistance without staff presence

Action	State	Relay contact	Signal lamp	Radio Message
	Assistance without staff presence			(none)
Call for Help	Assistance without staff presence (unchanged)			Call for Assistance
Call Acknowledgement	Alarm with staff presence			Acknowledgement
Call for Assistance	Assistance without staff presence			Call for Assistance

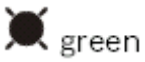
State before action: Staff presence without alarm

Action	State	Relay contact	Signal lamp	Radio Message
	Staff presence without alarm			(none)
Call for Help	Alarm with staff presence			Call for Help
Call Acknowledgement	Stand-by			Acknowledgement
Call for Assistance	Assistance with staff presence			Call for Assistance

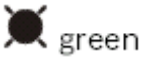
7.3.2 Device behavior during coded key insertion and removal

NOTICE!
The coded key insertion an removal functions are optional.

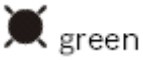
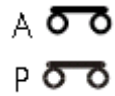
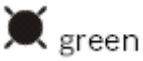
State before action: Stand-by

Action	State	Relay contact	Signal lamp	Radio Message
	Stand-by			(none)
Coded key insertion	Staff presence without alarm			Staff arrival with code
Coded key removal	Stand-by			Staff departure with code

State before action: Alarm without staff presence

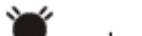
Action	State	Relay contact	Signal lamp	Radio Message
	Alarm without staff presence			(none)
Coded key insertion	Alarm with staff presence			Staff arrival with code
Coded key removal	(not possible)			

State before action: Alarm with staff presence

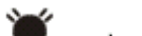
Action	State	Relay contact	Signal lamp	Radio Message
	Alarm with staff presence			(none)
Coded key insertion	Alarm with staff presence			Staff arrival with code
Coded key removal	Stand-by ***			Staff departure with code

*** If the call has not been acknowledged, removing the key will turn the NurseCall N46 Wall Transmitter in Alarm without Staff Presence state.

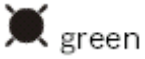
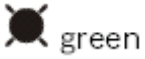
State before action: Assistance with staff presence

Action	State	Relay contact	Signal lamp	Radio Message
	Assistance with staff presence			(none)
Coded key insertion	Assistance with staff presence (unchanged)			Staff arrival with code
Coded key removal	Assistance without staff presence			Staff departure with code

State before action: Assistance without staff presence

Action	State	Relay contact	Signal lamp	Radio Message
	Assistance without staff presence			(none)
Coded key insertion	Alarm with staff presence			Staff arrival with code
Coded key removal	(not possible)			

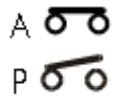
State before action: Staff presence without alarm

Action	State	Relay contact	Signal lamp	Radio Message
	Staff presence without alarm			(none)
Coded key insertion	Staff presence without alarm (unchanged)			Staff arrival with code
Coded key removal	Stand-by			Staff departure with code

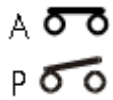
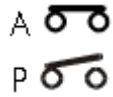
7.4 Operation with the staff presence processing deactivated

7.4.1 Device behavior upon pressing a button

State before action: Stand-by

Action	State	Relay contact	Signal lamp	Radio Message
	Stand-by			(none)
Call for Help	Alarm without staff presence			Call for Help
Call Acknowledgement	Stand-by			Acknowledgement
Call for Assistance	Assistance without staff presence*			Call for Assistance

State before action: Alarm without staff presence

Action	State	Relay contact	Signal lamp	Radio Message
	Alarm without staff presence			(none)
Call for Help	Alarm without staff presence (unchanged)			Call for Help
Call Acknowledgement	Stand-by			Acknowledgement
Call for Assistance	Assistance without staff presence*			Call for Assistance

State before action: Assistance without staff presence

Action	State	Relay contact	Signal lamp	Radio Message
	Assistance without staff presence			(none)
Call for Help	Assistance without staff presence (unchanged)			Call for Assistance
Call Acknowledgement	Stand-by			Acknowledgement
Call for Assistance	Assistance without staff presence			Call for Assistance

7.4.2 Device behavior during coded key insertion and removal

NOTICE!
The coded key insertion an removal functions are optional.

State before action: Stand-by

Action	State	Relay contact	Signal lamp	Radio Message
	Stand-by			(none)
Coded key insertion	Stand-by (unchanged)			Staff arrival with code
Coded key removal	Stand-by (unchanged)			Staff departure with code

State before action: Alarm without staff presence

Action	State	Relay contact	Signal lamp	Radio Message
	Alarm without staff presence			(none)
Coded key insertion	Alarm without staff presence (unchanged)			Staff arrival with code
Coded key removal	Alarm without staff presence (unchanged)			Staff departure with code

State before action: Assistance without staff presence

Action	State	Relay contact	Signal lamp	Radio Message
	Assistance without staff presence			(none)
Coded key insertion	Assistance without staff presence (unchanged)			Staff arrival with code
Coded key removal	Assistance without staff presence (unchanged)			Staff departure with code

There is no state change when the coded key is inserted or removed.

8 Storage

One can distinguish between long term storage and short term storage.
If the NurseCall N46 Wall Transmitter must be temporarily stored, it may not be necessary to wrap it completely.
However, if you wish to store the NurseCall N46 Wall Transmitter for a longer time, for instance in a storage room or any similar location, it is recommended to use original packing material.

8.1 Short term storage conditions

Unwrapped NurseCall N46 Wall Transmitter in a room:

► Protection against direct sunlight and dust.

8.2 Long term storage conditions

NOTICE!
The NurseCall N46 Wall Transmitter does not loose its programmed parameters when the power supply and the backup battery are disconnected.

NurseCall N46 Wall Transmitter in its original packing material in a storage room:

► Backup battery removed;
► Protection against direct sunlight and dust.

9 Disposal

This chapter describes the appropriate disposal of the NurseCall N46 Wall Transmitter.

The NurseCall N46 Wall Transmitter is marked with a crossed-out wastebasket symbol. This means that, at the end of its useful lifespan, the product shall be disposed separately from ordinary household wastes in accordance to the EU Directive 2002/96/EC.
The product and its accessories shall be delivered to an appropriate collection facility that will permit recycling, treatment and environmentally compatible disposal. This will prevent negative impact on the environment and human health and promotes the recycling of materials. For more information on available collection facilities, contact your local waste collection service or your local representative.

9.1 Disassembly

Only authorized personnel are allowed to disassemble a NurseCall N46 Wall Transmitter.

9.2 Local disposal locations

The nearest disposal locations are established in accordance with the currently applicable laws. Ask the local authorities.

9.3 Returning to the manufacturer

If there is no practical disposal place, the NurseCall N46 Wall Transmitter may be returned to your local representative.

9.4 Materials

The NurseCall N46 Wall Transmitter must be returned to an authorized point of recycling. In order to protect people and environment, the NurseCall N46 Wall Transmitter must be recycled in an adequate manner. Consequently, all applicable laws and bylaws must be respected.

9.4.1 Battery

NOTICE!
The battery should never be placed in municipal waste. Use a battery disposal facility if available.

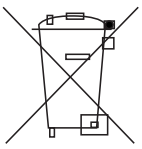


Fig. 9-1: Crossed-out wastebasket symbol

► Please check local regulations for disposal of batteries or call your local representative for information.

10 Appendix

10.1 Electrical specifications

External power supply & consumption	12 - 24 VDC Transmission: < 40 mA Idle mode: < 10 mA
Battery power supply & consumption	3V lithium battery CR2450 Transmission: < 30 mA Idle mode: < 10 µA
Battery life	Approx. 2 years

Table 10-1:

10.2 Dimensions and weight

Casing dimensions	**[mm]**
Depth	26
Width	82
Height	132
Casing weight	**[g]**
Weight (including antenna and power supply adaptor)	200

Table 10-2:

10.3 Operating temperature

Operating temperature	0 - 55°C

Table 10-3:

10.4 EC-Declaration of conformity

Security Systems

BOSCH

CE

EC-Declaration of Conformity

The undersigned, representing the following manufacturer

Manufacturer

Bosch Sicherheitssysteme GmbH

Address:

Rue du Pont 23
2300 La Chaux-de-Fonds
Switzerland

hereby declare that the following product(s)

Wall transmitter N46	CRS-RM-905FI	F.01U.066.636
Wall transmitter N46 with two relays	CRS-RM-906FI	F.01U.066.639
Wall transmitter N46 with presence key	CRS-RM-905FIOPT1	F.01U.131.094
Wall transmitter N46 with two relays and presence key	CRS-RXX-90621	F.01U.066.640

is (are) in conformity with the regulations of the following marked EC-directive(s) and bear(s) the CE mark accordingly

	reference number	title
☒	2004/108/EC	EMC Directive (EMC)
☒	2006/95/EC	Low-Voltage Directive (LVD)
☐	89/106/EC	Construction Products Directive (CPD)
☒	1999/5/EC	Radio equipment and Telecommunications Terminal Equipment (R&TTE), according to annex V
☐	94/9/EC	Electrical Apparatus for Potentially Explosive Atmospheres (ATEX), according to annex IV and VII

The conformity of the product(s) with (above ticked) EC directives is provided by the compliance with the following standard(s):

Standard(s) / date

EN60950-1 (2006-11), EN61000-4-2 (2001-12), EN50130-4 (2003-09), EN300220-1 V2.1.1 (2006-04), EN300220-1 V2.3.1 (2009-04), EN300220-2 V2.1.2, EN61000-6-3 (2007-09), EN301489-1 (V1.3.1 2001-09), EN301489-3 (V1.8.1 2008-04), EN50371 (2002-11)

Place, date:

La Chaux-de-Fonds,
2009-06-03

Vice President Business Unit
Printed name:
ST-CRS/PG-Riedemann

R+D Manager Business Unit
Printed name:
ST-CRS/ENG1, 2-Stauffer

Document No.: N46 *Version:* A1

Template ST10-Q6507_Declaration-of-Conformity, Version 1.03, Date: 05-May-08 Page 1

Table 10-4: EC-declaration of conformity, main page

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TeleAlarm SA
Rue du Pont 23
2300 La Chaux-de-Fonds
Switerland
www.telealarm.com

TeleAlarm Europe GmbH
Hertzstraße 2
04329 Leipzig
Germany