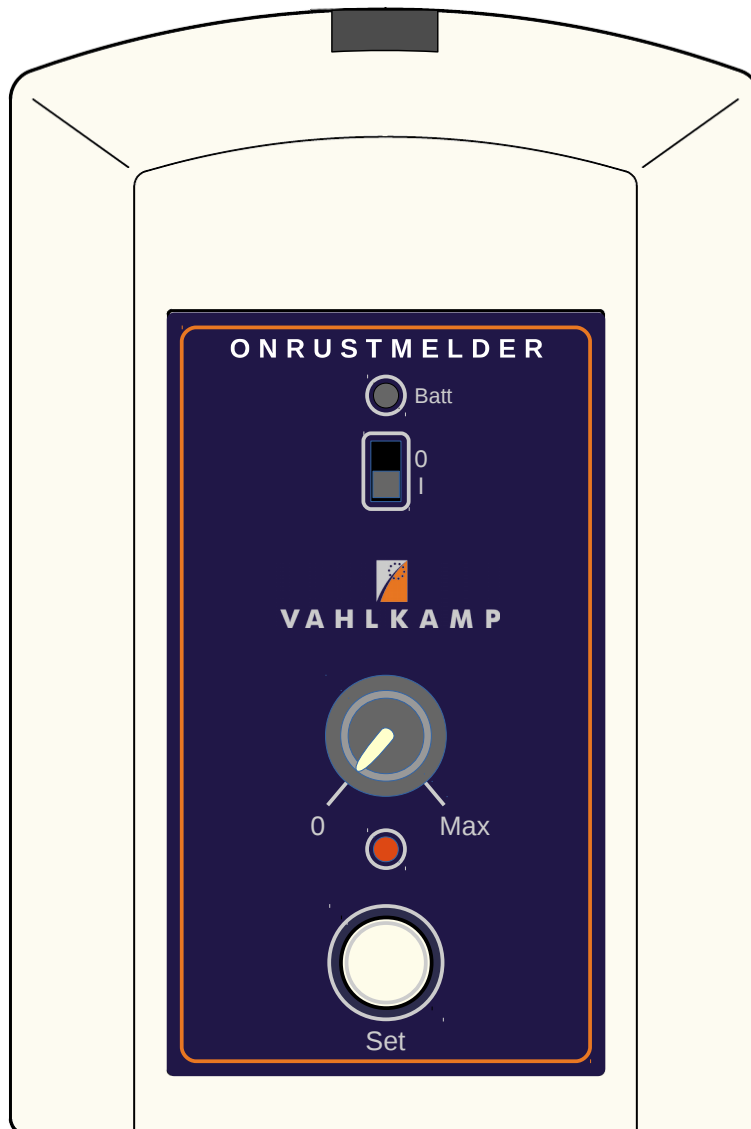




VAHLKAMP

Unrest Alarm v2.0

User's Manual



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1 General

Vahlkamp's Unrest Alarm product is a stand-alone wireless nurse alarm for the detection of unusual noises, indicative of distress with patients.

The Unrest Alarm features adjustable audio sensitivity, enabling the detection of anything from unusual grunts, vocalizations or sounds associated with movement in an otherwise silent environment, to triggering at very loud sounds only.

The audio detector is equipped with an LED, indicating triggering of the input, and a push button for setting the desired sensitivity level without triggering the alarm itself.

The Unrest Alarm wireless nurse alarm is fully compatible with Vahlkamp's existing TeleCall system. Additionally, a potential-free relay output is provided for wired alarm systems. This output is activated for the duration of one second in case of alarm.

A single nurse alarm call is sent after triggering. Renewed alarm is only possible after a reset, by switching the Unrest Alarm off and on again.

The Unrest Alarm is powered by one 9V battery. A low battery is signalled by both the battery LED and a wireless alarm signal that differs from the usual signal.

2 General usage advice and precautions

- The Unrest Alarm is an electronic device, intended for indoor use exclusively.
- The Unrest Alarm is equipped with a radio transmitter, compliant with EU-standards for unlicensed operation. The Unrest Alarm system is therefore approved for use within the EU only. Please contact Vahlkamp for information about use outside the EU.
- Do not expose the Unrest Alarm device to temperatures below 0°C or over 50°C.
- Do not operate the Unrest Alarm device in moist conditions.
- Prevent falling and impact damage to the Unrest Alarm device.
- Prevent contact with solvents such as acetone, alcohol, and aggressive cleaning agents.
- Cleaning the Unrest Alarm device is best done using a soft cloth, slightly moistened with a mild detergent solution. When cleaning, prevent water from entering the device through the openings for the push button, the rotary knob and the power switch.
- Do not unscrew the Unrest Alarm housing. The Unrest Alarm device does not contain user-serviceable parts, apart from the battery.

Failing observe these precautions voids any warranty with regard to the Unrest Alarm product.

3 First use and test

Before first use of a Unrest Alarm device, please check if all materials and accessories are present:

Base set:

- 1 x Unrest Alarm v2.0 device
- 1 x 9V alkaline battery (ANSI: 6LR61)
- 1 x cable for wired alarm (when using a wired nurse alarm system)

3.1 Battery

Insert a 9V alkaline battery in the battery compartment at the bottom of the Unrest Alarm device.

The use of a high-quality alkaline battery is recommended. With one or two alarms per day, this will provide on average 1 year of continuous use.

A low battery level is signalled by blinking of the battery LED '**Batt**' above the power switch. When this happens, replace the battery within one or two days.

3.2 Final check and testing

When using the wireless TeleCall system, please check if a matching receiver unit is present and switched on. In particular, check whether the Unrest Alarm ID code matches the codes preset in the TeleCall receiver.

3.2.1 General

- Upon triggering of an alarm source, a single nurse alarm signal is issued. A subsequent nurse alarm signal is only possible after resetting the device.

3.2.2 Testing the Unrest Alarm

The Unrest Alarm is tested in the following manner:

- Make certain that the Unrest Alarm device is switched off.
- Turn the rotary knob for the sensitivity setting fully counter-clockwise.
- Aim the front of the Unrest Alarm towards the sound source.
- Switch on the Unrest Alarm device.

The battery LED should light up green for two seconds, signalling that the device is switched on. Also, the red indicator LED near the front should light up once. When the green LED switches off, the Unrest Alarm device enters the stand-by mode.

- Press the push button marked '**Set**' and keep it pressed.
- Slowly turn the sensitivity knob clockwise (increased sensitivity) while producing the sound that should trigger an alarm.
- When the red indicator LED at the front lights up, the sensitivity is high enough to trigger an alarm at the current sound level. Pressing the push button prevents an actual alarm.
- Release the Set push button.

After 1 second, the Unrest Alarm returns to the stand-by mode, monitoring the sound level in the vicinity.

- Once again produce the sound that should result in an alarm call.

The nurse alarm should now activate immediately. After this, the LED above the input will keep blinking to indicate that an alarm condition has occurred.

3.2.3 Reset

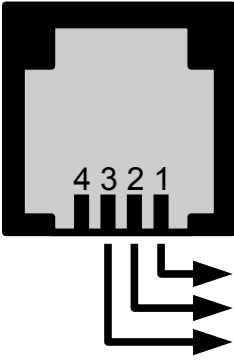
The Unrest Alarm device is reset by simply switching the device off, so by sliding the power switch to the '0' position. Then take care to resolve the alarm condition by making certain that the surroundings are quiet again. After this, the Unrest Alarm device can be switched on again.

3.3 Wired alarms

The Unrest Alarm system also supports the use of a potential-free relay contact, suitable for both normal-open (NO) and normal-closed (NC) operation. Upon alarm, this relay is activated for one second. This wired alarm output provides a solution for situations where the distance to the nurse station or the alarm room exceeds the wireless range, or when TeleCall receivers are not used for other reasons.

The wired output connector is an RJ11-connector. Please refer to the hardware specifications for the correct connections.

4 Specifications

Sensor input		
Type	Microphone	
Transmitter		
Type	Band H/I, FSK	
Frequency	868,200 MHz	
Modulation Depth	30 kHz	
Modulation	50/58 bits	50 bits + 8-bits battery low message, non-recurrent
Relay Output		
Type	COM + NO + NC	Potential-free
Configuration	4-pin RJ11, rear view: 1: C 2: NO 3: NC 4: [unused]	 <p>C (common) NO (normally open) NC (normally closed)</p>
Contact voltage (max.)	220 VDC / 250 VAC	
Contact current (max.)	2 A	
Contact power (max.)	60 W	
Activation duration	1 second	Non-recurrent
Power Supply		
Type	1 x 9V (6LR61)	
Voltage (nominal)	9 V	
Voltage (maximum)	10 V	
Current consumption	10 µA / 20 µA	Stand-by / activated

4.1 EMC Conformity by parameter

Note: All measurements valid in temperature range between 0°C – 50°C

Parameter	Requirement	Measured	Status
Primary frequency	Band H/I, 869.2 MHz	869.200 MHz ±10 kHz	PASS
Output Power	< 10 mW (Band I)	5 mW (7 dBm) maximum	PASS
Tertiary Harmonic	< -50 dBm	-55 dBm maximum	PASS
FSK Modulation Depth	100 kHz	30 kHz +/-5 kHz above primary	PASS
Duty Cycle	< 0.1%	< 10 ms per 60 s	PASS

On request, a separate manufacturer declaration of CE/EMC conformity will be provided.