LoRa Siren Unit

MTC-XX-SU01 / MTC-XX-SU02

Quick Start Guide

Thank you for choosing Mutelcor GmbH.
We are proud to be part of your project.

1. Need Help?

For any other query related to our product, please contact the local distributor or Mutelcor at support@mutelcor.com

2. Manufacturer

Mutelcor GmbH: An der Bastei 42a, 47259 Duisburg, Germany

Office: +49 203 72996070, Fax: +49 203 72996071, Web: www.mutelcor.com

3. Safety

Read the instructions carefully before device installation, operation and maintenance

1	Connect the adapter to a properly wired electrical outlet
2	The device should only be used with accessories or spare parts supplied by your reseller
3	The device enclosure must not be opened when connected to power
4	Maintenance and repair must be carried out by qualified personnel authorized by reseller
5	Keep the device away from any hot surface or outdoor environment

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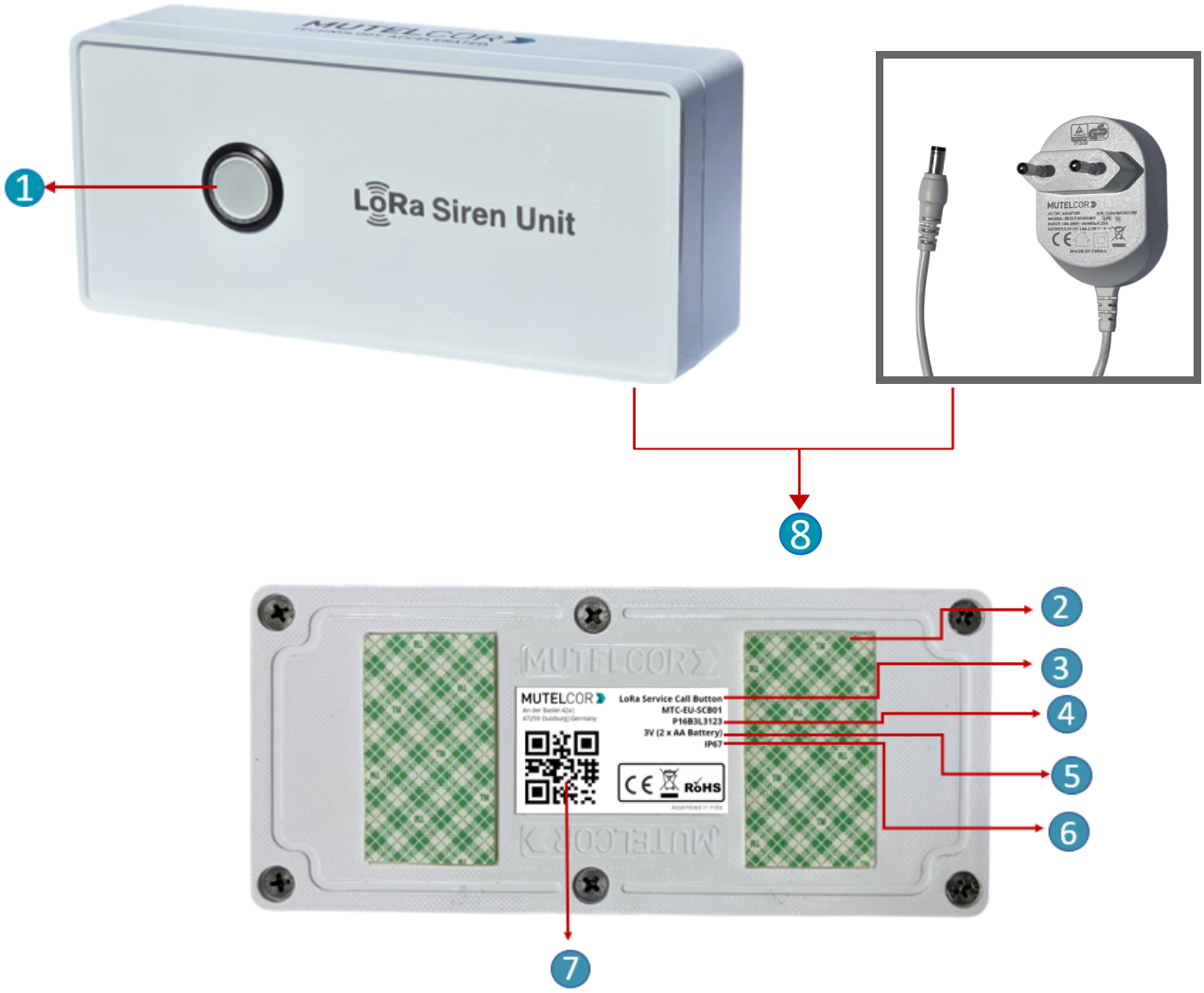
4. Product Description



At a Glance

No.	Description		No.	Description
1	Button / Multi-color LED		5	Power supply Input (3.3V ⎓1A)
2	Double Sided 3M Tape		6	Ingress Protection
3	Model Name		7	DevEUI with QR code
4	Module ID		8	Jack Connector (for power adapter)

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5. Activating the Device

	• Provision the device first into a LoRa network before activation • As long as the device is connected to the power supply, the GREEN LED light glows constantly by default. • Do not place the device near an air conditioner or a heater

When connected to power, the LED flashes shortly. The device confirms a successful registration in the LoRa Network by rapidly flashing the LED 3 times. This indicates the device is registered in the LoRa Network and active.

The LoRa Siren Unit is a Class C Device and can be triggered by a LoRa downlink message. As a LoRa Class C Device, it constantly listens to receive downlink messages over LoRaWAN from any backend Application.

The downlink messages sent by an application are called Trigger Alerts and the LoRa Siren Unit supports up to 4 different types of Trigger Alerts. Each Trigger Alert type results in the LoRa Siren Unit to respond in a certain configured way. The response behavior for each Trigger Alert Type on the device is defined by the following configurable parameters on the device:

- LED Color (GREEN, YELLOW, RED)
- LED Behavior (OFF, ON, Flashing)
- Time duration of LED
- Buzzer Sound (OFF, ON, Beep)
- Buzzer duration (Time with number of beeps)

The above parameters and the behavior of each Alert Type are fully configurable via OTA command.

The Trigger Alert message sent by a backend Application can also optionally include the time duration for the specific Trigger Alert to be active on the Siren Unit. This allows the backend Application to fully control the Alerts and their duration on the device. Furthermore, pressing the Button on the Siren Units stops the alarm locally and also sends a LoRa message to the backend application connected to the device.

For all details on changing parameters via OTA Commands, examples of Trigger Alert Messages etc. please refer to the OTA Configurator and Payload documentation or contact your local distributor or Mutelcor GmbH at support@mutelcor.com

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LoRa Siren Unit in combination with Mutelcor LoRa Products

Here are a few examples of the different settings of the LoRa Siren Unit when used with other Mutelcor LoRa products and Mutelcor Backend Application. All the below settings are fully configurable.

For Mutelcor LoRa Products

- Smart CO2 LoRa Sensor
- LoRa Air Quality Sensor

LoRa Siren Unit for Status Indication of Thresholds: Constant Green LED when powered ON

Alert Type	LED Color	LED Indication	LED Duration	Buzzer Sound	Buzzer Duration	Beep Interval	Action Required
Alert Type 1 (Device ON)	**GREEN**	**ON**	**Unlimited**	**OFF**	**-**	**-**	**None**
Alert Type 2 (Lower Threshold)	**ORANGE**	**Flashing**	**10 min**	**ON**	**3 Beeps**	**0.5 second**	**Press the button (LED turns GREEN)**
Alert Type 3 (Upper Threshold)	**RED**	**Flashing**	**10min**	**ON**	**6 Beeps**	**0.25 second**	**Press the button (LED turns GREEN)**

For Mutelcor LoRa Products

- LoRa Panic Button with Confirmation
- LoRa Service Call Button
- LoRa Manhole Sensor

LoRa Siren Unit Status Indication of Alarms raised: Constant Green LED when powered ON

Alert Type	LED Color	LED Indication	LED Duration	Buzzer Sound	Buzzer Duration	Beep Interval	Action Required
Alert Type 1 (Device ON)	**GREEN**	**ON**	**Unlimited**	**OFF**	**-**	**-**	**None**
Alert Type 4 (Alarm)	**RED**	**Constant ON**	**10 min**	**ON**	**5 Beeps**	**1 second**	**Press the button (LED turns GREEN)**

Note: If the buzzer in the device continuously beeps at every 8-second interval, then there is a software error. When this happens the device must be returned for repair. Please immediately contact your reseller.

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6. Mounting

⚠	• Device should be mounted on clean non flammable solid surface • Devices must only be used in an indoor environment.

To ensure best product performance and prevent malfunctioning, avoid the following :

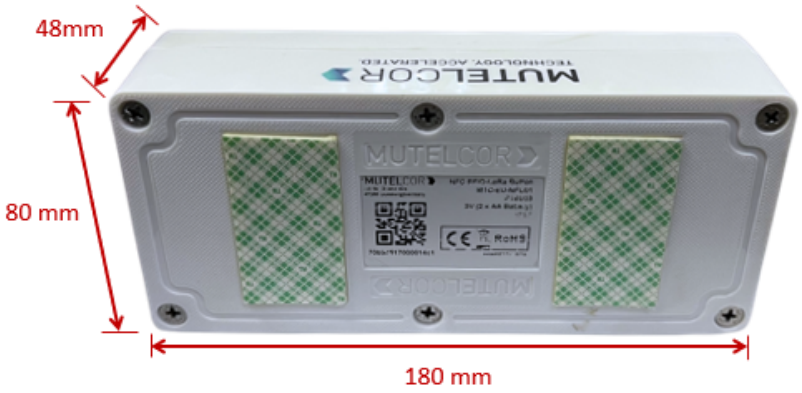
- Areas that are susceptible to vibration
- Areas near the high-voltage cables
- Near heating appliances and hot surfaces

Device Mounting can be done by following two options:

Option A : Paste the device directly with the provided **3M double-sided tape** on the back of the device as shown in Fig 8.1 below

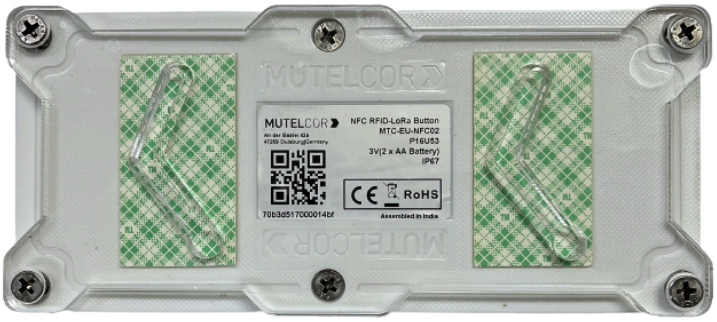
Option B : Use of Transparent PC (Polycarbonate) **Mounting Plate**:

Follow the instructions given in the document "Use of Transparent PC (Polycarbonate) **Mounting Plate**" sent separately by email.



Mounting with 3M Double sided tape

Fig. 8.1



Mounting with PC Mounting Plate

Fig. 8.2

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7. Technical Specifications

Model Name	LoRa Siren Unit		**Enclosure Size**	180 x 80 x 48 mm
Module ID	P15L2RG		**Net Weight**	350 g
Model No	MTC-XX-SU-01 (Red Lens, 2-Color LED) MTC-XX-SU-02 (Transparent Lens, 3-Color LED)		**Power Adapter**	Input: 100-240V~50/60Hz Output: 3.3V⎓1A, 3.3W
Model No. (XX) LoRa Frequency	EU: EU 863-870 IN: IN865-867 US: US 902-928 AU: AU915-928 AS: AS923-1 KR: KR920-923 IL: AS923-4 OTAA and ADR supported		**Operating Temperature**	-18°C to +55°C
			Transmission Power	Max 25mW (14 dBm)
LoRaWAN Version	MAC V1.0.3		**Ingress Protection**	IP30

8. Declaration of Conformity

Hereby, Mutelcor GmbH, declares that the Product is in conformity with the essential requirements of Article 3.1 (a) the protection of the health, 3.1 (b) an adequate level of electromagnetic compatibility and 3.2 effective use of the spectrum of 2014/53/EU

The CE mark appears due to the issued declaration of conformity under responsibility of Mutelcor GmbH as manufacturer, who declares that the used radio equipment is in compliance with relevant EC Directives. For any further information, please contact Mutelcor GmbH at support@mutelcor.com

In Europe, the Sensor also complies with EN62479 and ERC requirements regarding duty cycle and maximum EIRP

9. Disposal / Recycling

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	Do not dispose of the product with household waste. For proper disposal, contact a waste disposal company **WEEE-Reg.-Nr.: DE 71445608**

10. Product complies and Directives

RoHS CE ETA **Equipment Type Approval (INDIA)**
Issue by Wireless Planning and Coordination (WPC)
DEPARTMENT OF TELECOMMUNICATIONS

11. Warranty

Contact your reseller for warranty

	LoRa Siren Unit is not warranted by Mutelcor GmbH in case the enclosure is opened, modified, broken, painted, branded out, outlined for any reason

The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Mutelcor GmbH be liable for any consequential, special or incidental damages.

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