MUTELCOR

LoRa Customer Feedback
MTC-XX-CF01

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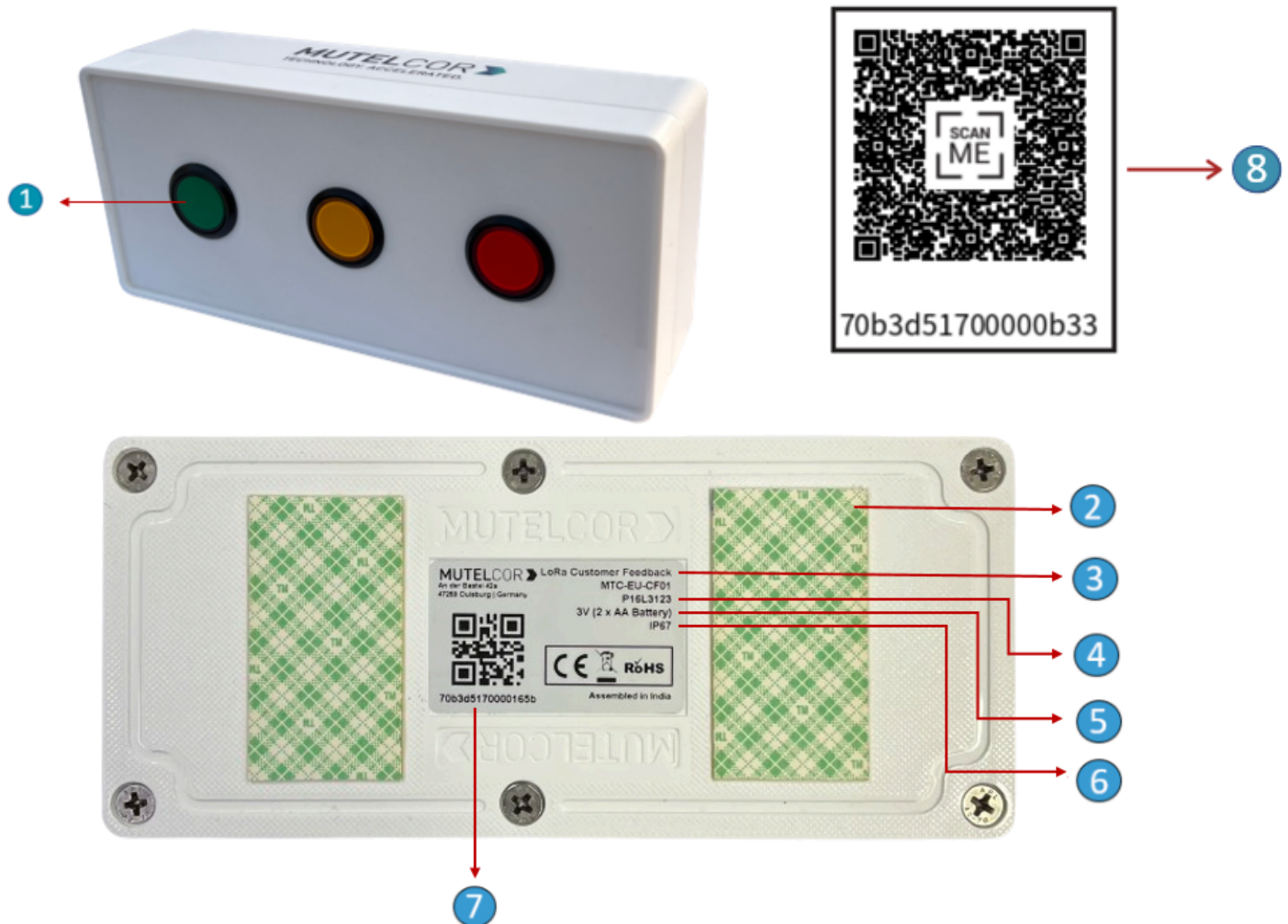
Office: +49 203 72996070, Fax: +49 203 72996071, Web: www.mutelcor.com

3. Safety

Read the instructions carefully before device installation, operation and maintenance.

1	Maintenance and repair must be carried out by qualified personnel authorized by reseller
2	Keep the device away from any hot surface

4. Product Description

At a Glance

No.	Description		No.	Description
1	Feedback Buttons		5	Voltage
2	Double Sided Tape		6	Ingress Protection
3	Model Name		7	DevEUI with QR code
4	Module ID		8	Device info Access Sticker (optional)

5. Opening and Closing the Device

![info icon]	• Always wear gloves or keep your hands dry while handling the PCB • Do not touch the circuitry part of the PCB with bare hands

For reset or inserting and replacing the batteries, opening of the device is needed.
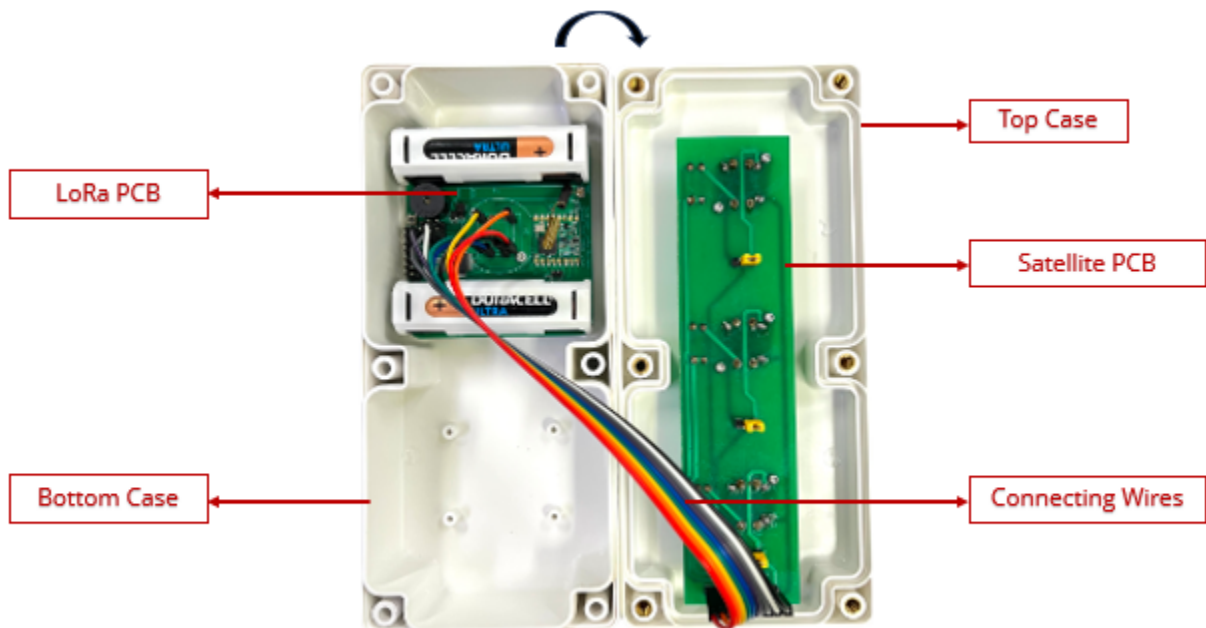

Fig. 5.1

Fig. 5.2

For opening the device, please follow the steps described below:
1. Unscrew the six screws on the bottom of the enclosure as shown in Fig 5.1
2. Gently separate the top case from the bottom case as shown in Fig.5.2
3. After Reset or Insertion or Replacement of batteries, gently close the top case and bottom case of the enclosure together ensuring connecting wires to go across the enclosure as shown in Fig. 5.2.
4. Tighten all the six screws

6. Insertion & Replacement of Batteries

(i)	• Open the device to insert the batteries • Always wear gloves or keep your hands dry while handling the PCB • Do not touch the circuitry part of the PCB with bare hands

For inserting the batteries, please follow the steps described below:

1. Open the device (for details please refer to section 5, "Opening and Closing the Device")
2. The PCB is attached to the bottom of the case. To insert the batteries, **lift up two white battery caps** from battery holders of PCB , as shown in fig 6.1
3. White Battery Caps are provided to secure batteries in the battery holders to avoid battery pop-out and disconnection.
4. Insert 2 AA-Alkaline Batteries and make sure, the positive (+) and negative (-) ends of batteries are facing in the correct terminals.
5. After insertion of Batteries, cover the battery holders by using **white battery caps** as shown in fig 6.2
6. Once the batteries are inserted, close the top & bottom cases of enclosure as described in the instructions in section 5 "Opening and Closing the Device"
7. To replace the batteries: follow step 1 and 2 of section 6 "Insertion & Replacement of batteries.Hold the LoRa PCB and carefully and remove the batteries from the holders and follow step 5, 6 and 7 of Section 6 for "Insertion & Replacement of Batteries".

Lifting of Battery Cap

Fig. 6.1

Battery holder covered with Battery Caps

Fig. 6.2

The insertion or replacement of the batteries will trigger the device to register to the LoRaWAN network. When inserting the batteries, the LED shortly flashes once. The device confirms a successful registration on the LoRa Network by rapidly flashing the LED 3 times. This implies that the device is activated in a LoRa network successfully and will send heartbeats and alarms via LoRa.

Note: If rejoining of the device fails, one can manually reset the device as described in section 9 "Resetting of Device"

7. Activation of Device

	• The device must be provisioned in the LoRa network before activation, as otherwise it will continuously send join requests towards the network, which may result in quicker battery discharge

The device will automatically try to register via OTAA to a LoRaWAN network upon
Insertion or replacement of batteries . When inserting the batteries, the LED shortly flashes once. The device confirms a successful registration on the LoRa Network by rapidly flashing the LED 3 times. This implies that the device is activated in a LoRa network and will send heartbeats and votes via LoRa.

When a button is pressed, the vote is counted and the buzzer indicates a successful vote. After a maximum of 5 minutes or after 100 votes on a button, a message with the counted votes is sent to the LoRa network.

Every time, button is pressed , the following happens by default:
- The count of the button pressed will be increased
- The buzzer sounds for 1/4 second.

For all details on the payload sent on LoRa, changing values via OTAA, provisioning of the device in a LoRa network, please contact the local distributor or Mutelcor GmbH at support@mutelcor.com

Note: If the buzzer in the device continuously gives a beep every 8-seconds, then there is a software error. When this happens the device must be returned for repair. Please immediately contact your reseller or Mutelcor GmbH at support@mutelcor.com

QR code sticker: All devices are QR-Ready. If requested, we can activate this feature to allow reading the current battery status by simply scanning a QR code. To activate the service, please contact your local distributor or Mutelcor GmbH at support@mutelcor.com

8. Mounting of Device

⚠️	The device should be mounted on clean and non flammable solid surface

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

Transparent PC Mounting Plate

Fig. 8.2

9. Resetting the Device

ⓘ	• Open the device for resetting • Always wear gloves or keep your hand dry while handling the PCB • Do not touch the circuitry part of the PCB with bare hands • Do not use sharp objects to press the reset button

Resetting the device may be needed, in case re-register the device into the LoRa network.
For resetting please follow the steps described below:

1. Open the device. For details please refer to section 5 "Opening and Closing the Device"
2. Ensure 2 AA-Alkaline Batteries are inserted in the battery holders
3. On the PCB, observe carefully a small reset button as shown in Fig 9.1
4. Press (do not hold) the button shortly for a second

The reset will trigger the device to re-register to a LoRaWAN network. When resetting, the LED shortly flashes once. The device confirms a successful registration on the LoRa Network by rapidly flashing the LED 3 times. This implies that the device is activated in a LoRa network and will send heartbeats and votes via LoRa.
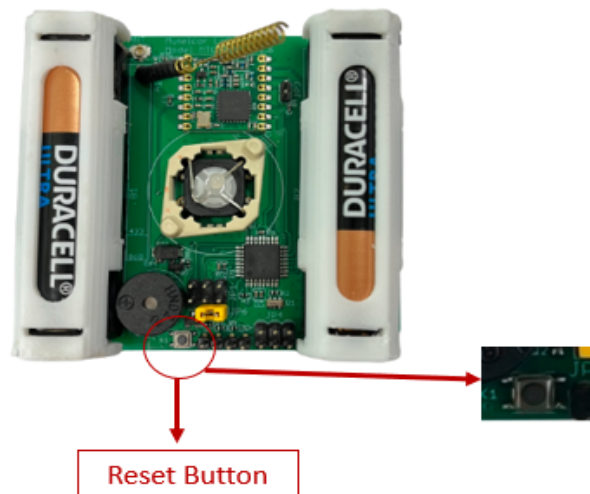

Reset Button

Fig 9.1

10. Technical Specifications

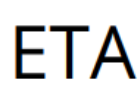|			
Model Name	LoRa Customer Feedback	**Enclosure Size**	180 x 80 x 48 mm
Module ID	P16L3123	**Net Weight**	350 g
Model No	MTC-XX-CF-01	**Battery life**	5 Years
LoRa Frequency	EU: EU 863-870 IN: IN 865-867 US: US 902-928 AU: AU915-928 AS: AS923-1 KR: KR920-923 IL: AS923-4 OTAA and ADR supported	**Voltage**	3V (2 x AA-Alkaline Battery)
LoRaWAN Version	MAC V1.0.3	**Operating Temperature**	-18°C to +55°C
Transmission Power	Max 25mW (14 dBm)	**Ingress Protection**	IP40

11. 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 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.

12. Product complies and Directives

13. Disposal / Recycling

	• Do not dispose of the product with household waste. For proper disposal, contact a waste disposal company • Discharge batteries store in a plastic or cardboard container that doesn't conduct electricity in case there is a spark • Search the area for recycling centers that accept single-use batteries using Earth911's Recycling Search. • **WEEE-Reg.-Nr.: DE 71445608**

14. Warranty

Contact your reseller for warranty

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

The forgoing 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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Mutelcor GmbH Team

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