MIYMD ManDown Sensor

User Manual

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MIYMD ManDown Sensor User Manual
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1. Introduction

The MIYMD ManDown Sensor has a built-in tilt device, which can detect if the person holding it is in a horizontal position, such as lying on the floor.
The sensor will automatically send an alarm when its position corresponds to horizontality after a certain time. Pressing its central bed button will activate a help call at any time.

It can be held, for instance, as a necklace by an elderly person or as a safety device by a lone worker in a hazardous environment. The MIYMD ManDown Sensor will be part of a Resident Alert System.

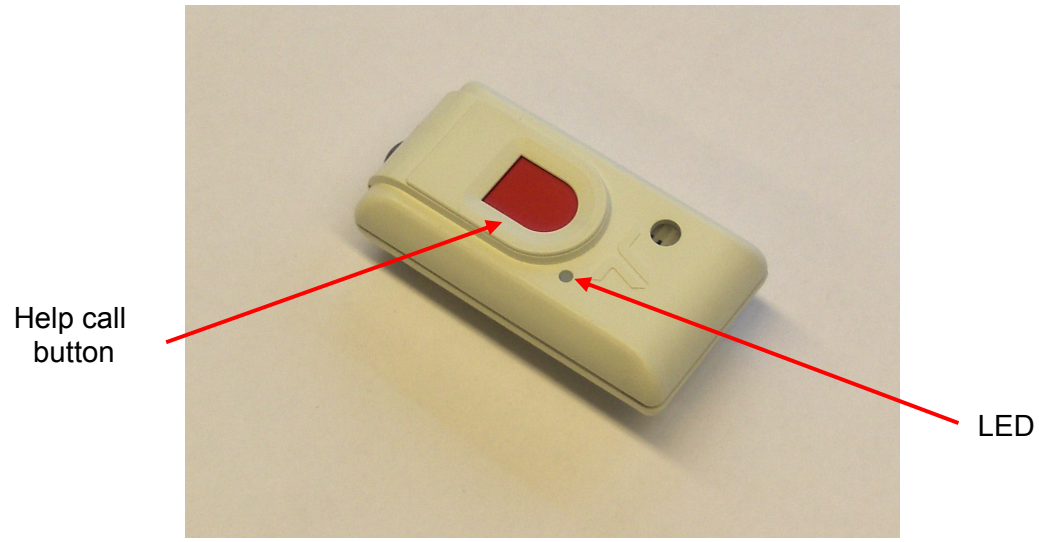


Fig. 1 ManDown Sensor

2. Description

The MIYMD ManDown Sensor is equipped with a LED indicator that will flash every ten seconds to show that the sensor is active. This LED indicator will flash green if the battery is ok or red if the battery is low. Pushing the central red button will send a help call to the social alarm system, followed by a short beeping sound.

Caution!
A help call is sent only after the central red button has been released. The user should be aware that pressing the central red button must be short. If the central red button is being pressed longer that five seconds, the sensor will be turned off, and no help call will be sent. *See chapter 4.2. Turning off the sensor.*

3. Compatibility of the MIYMD ManDown Sensor

The MIYMD ManDown Sensor must always be associated with a corresponding Resident Alert System, according to the following table.

Type of MIYMD ManDown Sensor	Social alarm system
MIYMD ManDown 434 MHz, TeleAlarm protocol	Bosch Resident Alert System

4. Operating

4.1. Starting the sensor

When the MIYMD ManDown Sensor is off, the user only has to press the central red button to turn it on. A slow beeping sound will then confirm that the sensor is active.

Notice!
No help call transmission will take place during this operation.

4.2. Turning off the sensor

- Press the button for about five seconds
- A beeping sound is emitted during two seconds
- **During these two seconds**, release the button and press it a second time,
- The sensor is then turned off
- This last step will be confirmed by a slow beeping sound

It is always possible to turn off the sensor, even when the help call button is deactivated.

Notice!
A help call will be activated only after pressing the help call button for less the five seconds and releasing the central red button. This means that during the procedure of turning off the sensor, no alarm will be generated.
If the central red button is being pressed and released less that five seconds or pressed longer than seven seconds, a help call will be generated. *See chapter 2 Description.*

4.3. Detection mode

Detection by the MIYMD ManDown Sensor can be decomposed into two periods of time.

1) Tilt Detection

When the sensor detects a tilt of more than 60 degrees, it will start its internal chronometer for approximately **ten seconds**.
If the sensor comes back to a vertical position within these ten seconds, the chronometer is reset.

2) Pre-Alarm

If the sensor does not come back to a vertical position within ten seconds, a pre-alarm starts, accompanied by a beeping sound. This period of time is factory-set and lasts approximately **thirty seconds**. The pre-alarm is cancelled if the sensor comes back to a vertical position or if the help call button is pressed.

This pre-alarm may be suppressed by making a solder bridge. *See Fig.2. Interior view of a MIYMD ManDown Sensor.*

4.4. Repeating the alarm

After a fall, as long as the sensor detects a horizontal position, the alarm will repeat itself after an average period of time of **two minutes and thirty seconds**.

4.5. Deactivating the help call button and the pre-alarm

Making a solder bridge allows to deactivate the help call button or to suppress the pre-alarm.

In this case, during the automatic tilt alarm, the sensor remains silent. During all help calls made by pressing the button, the sensor will always issue a beeping sound.

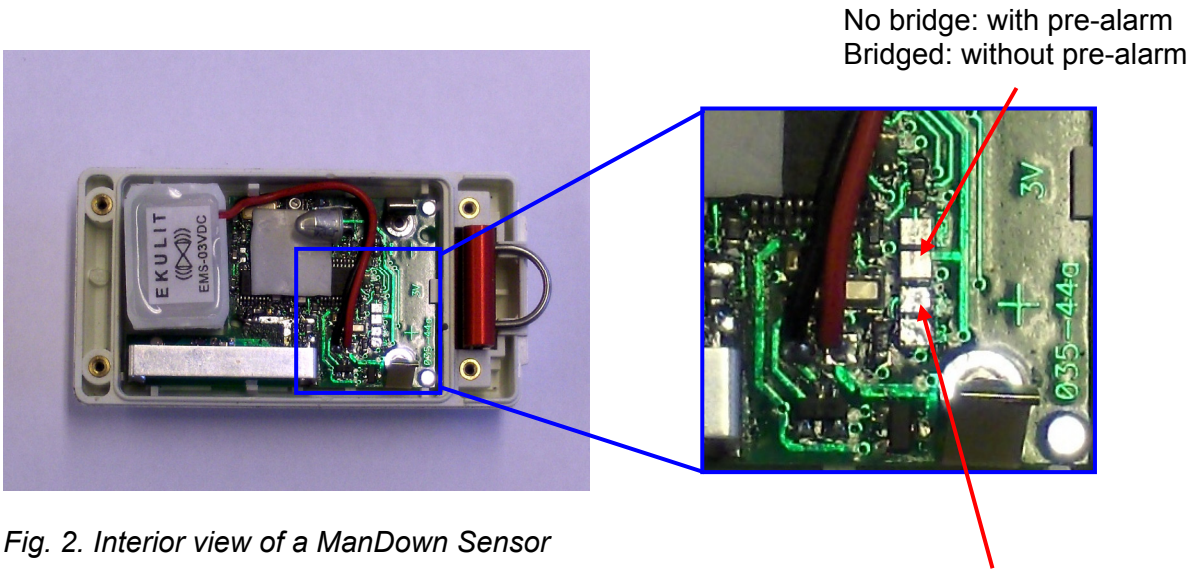


Fig. 2. Interior view of a ManDown Sensor

5. Programming the MIYMD ManDown Sensor

To program a MIYMD ManDown Sensor within a Resident Alert System, follow the procedure described for the system you are using. As the MIYMD ManDown Sensor can be considered as a standard transmitter, the system will recognize it during the programming step. Please refer to the manual of the corresponding Main Unit.

6. Maintenance

6.1. Safety instructions

	**Caution!** There is a danger of explosion if the replacement of the battery is not performed correctly! ▪ Replace the battery only by an identical or equivalent type. ▪ Dispose of the used batteries at an appropriate recycling facility. Although battery replacement may be done by non-specialized personnel, the manufacturer recommends that it should be performed by your local dealer.

	**Caution!** The MIYMD ManDown Sensor contains highly sensitive electronic components. It should always be opened in an ESD (Electro Static Discharge) 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 and metallic surfaces if not absolutely necessary.

6.2. Storage

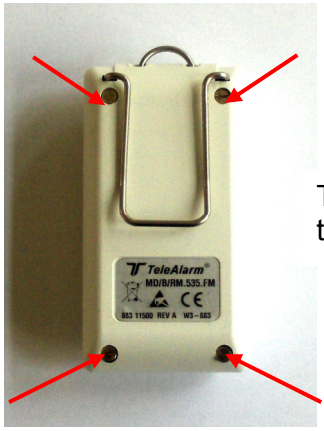
Short term storage (less than two weeks)
Deactivate the sensor.

Long term storage (more than two weeks)
Remove the battery and store the MIYMD ManDown Sensor protected from direct sunlight, moisture and dust.

6.3. Replacing the battery

Necessary tool for opening the sensor case:
Jeweler's Screwdriver 0.114 in (2.9mm)

- Turn off the MIYMD ManDown Sensor. *See chapter 4.2. Turning off the sensor*.
- Unscrew the four screws of the case, as shown in *Fig. 3. Bottom view of the MIYMD ManDown Sensor.*
- Carefully remove the compression foam, as well as the used battery.
- Replace the new battery; ensure that it is in the correct position.
- Carefully place the compression foam as shown in *Fig. 4. Opening the MIYMD ManDown Sensor.*
- Close the case with the four screws.



The arrows show the screws of the transmitter case

Fig. 3. Bottom view of the ManDown Sensor

Notice!
To avoid deteriorating the inserts, do not force the screwing.

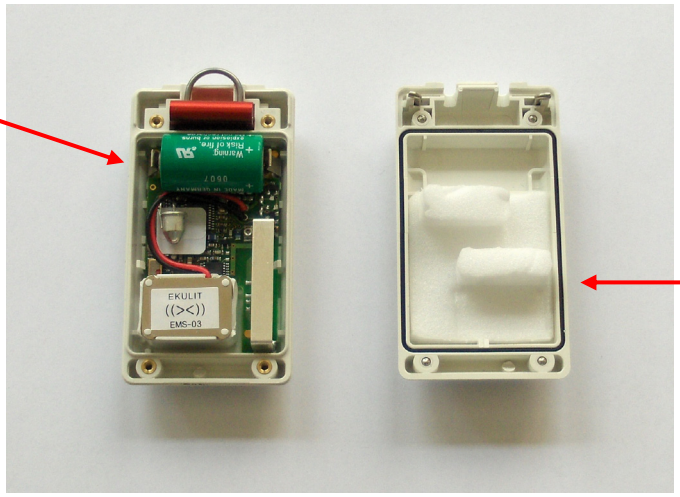


Fig. 4. Opening the ManDown Sensor

7. Technical Specifications

Dimensions	2.95 x 1.6 x 1 in (75 x 40 x 23 mm)
Frequency	434 Mhz
Tilt sensor	Mercury-free type with activating at a 60° angle with vertical
Pre-alarm	10 seconds of detection, followed by 30 seconds of signal before automatic activation.
Battery	VARTA 3V CR1/2AA or equivalent (Lithium 3.0V, diam.14.5mm x 25mm)
Consumption	< 5 µA if the MIYMD ManDown Sensor is deactivated. < 13 µA if the MIYMD ManDown Sensor is on stand-by
Battery lifetime	from six months to two years, depending on operation and the number of detections performed
Type of plastic	ABS Cycolac GPM5500S white 25020 with fire classification UL 94 HB

8. FCC Warning Statement

This equipment complies with Part 15 of the FCC rules. Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules subject to the following two conditions:

1) This device may not cause harmful interference
2) This device must accept all interference received, including interference that may cause undesired operation.