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User Guide

MM Receiver / Repeater 868

Release Date: 06.04.2017

M-000018.en v1.1.1

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1. Introduction

The *Mobility Monitor Receiver* -868 and Repeater-868 are part of the system *"Mobility Monitor Wireless-868".* These components are responsible for the transfer of data from one or more *Mobility Monitor* Wireless to a data server.

1.1. Mobility Monitor Wireless

The *Mobility Monitor* Wireless system has the following properties:

- Continuous data transmission from Mobility Monitor to the server.
- The current status of the device can be seen in real-time in the *Mobility & Care Manager* PC software (LiveView).
- When the connection is interrupted, the data is stored temporarily and automatically transferred when the connection becomes available again.
- Support for multiple redundant *receivers* and *repeaters.*
- Data transfer via USB stick is still possible.

1.2. This Document

This document only covers the system components *"Receiver*-868" and" *Repeater*-868". For how to use the *Mobility Monitor,* please refer to its separate instructions.

For more detailed information on the entire system, please also refer to the separately available documentation for the *Mobility Monitor* Wireless System.

Please read the safety information in Chapter 2 carefully!

2.   General Safety Information

The following information is for the safe use of the device, so that neither the user nor the product will be compromised. The following warning symbols are used for this product:

⚠️	Statement that prevents serious injury to staff or to the user.
ℹ️	Important information that will ensure proper use of the product.
🗑️	The device must not be disposed of with normal household waste. Please contact an authorized representative of the manufacturer for obtaining information concerning the proper decommissioning of your equipment.

ℹ️	Please contact the distributor or manufacturer for help with the installation and operation of the device, or if you notice any unexpected behavior of the device.
⚠️	The device may only be operated in countries where it is permitted: Europe (EU, CH, NO).
⚠️	The device must be installed and placed into operation according to the instructions.
⚠️	The device is only resistant to splash water! If dirty, the device should only be wiped with a damp cloth. Otherwise there is danger of an electric shock.
⚠️	Only use the supplied **power adapter** of type: Meanwell, Model No: GS06E-1 Input: 100-240V AC, 50/60Hz, 0.2A Output: 5.0V DC 1.00A, 5.0W max
⚠️	Do not position the unit next to sensitive medical equipment.
⚠️	The device must not be opened. Otherwise there is danger of electric shock.
⚠️	Conversion and/or modification of the device is prohibited. The unit must not be subjected to heavy mechanical stress.
⚠️	The unit requires special precautions with regard to its electromagnetic compatibility (EMC) and must be installed according to the instructions.
ℹ️	The unit is suitable **for indoor use only.**
ℹ️	The positioning of the device near other electrical equipment may adversely affect the properties of the electromagnetic compatibility (EMC).

3. Intended Use

The data transferred by *Mobility Monitor* will be received by a *receiver* and then transmitted to the server. To achieve even greater reach, additional *repeaters* can be used over long distances. If needed, more than one *receiver* can be used. This makes sense when different buildings or floors must be covered, but also to improve the availability of the system with redundancy. Analysis and visualization of the data takes place on workstations with the PC software *Mobility & Care Manager* installed.

⚠	Any use other than for the purpose described in this document is not permitted. Any other use may cause damage to the product or hazards (short circuit, fire, electric shock).
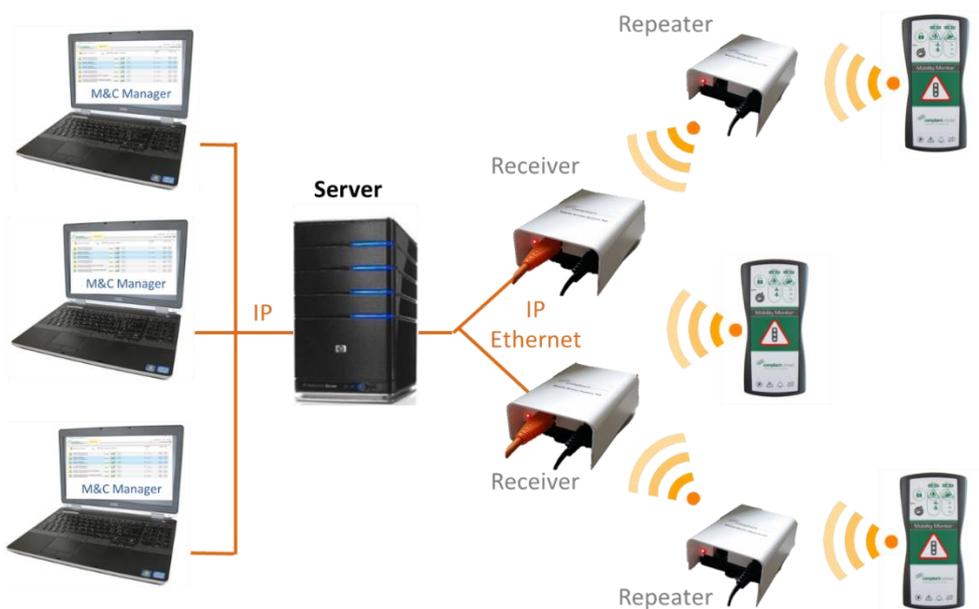
3.1. Mobility Monitor *Receiver*-868

The *Mobility Monitor Receiver*-868 is a gateway that receives data from a *Mobility Monitor* Wireless-868 via radio and passes it to a server via a TCP / IP Ethernet interface.

3.2. Mobility Monitor *Repeater*-868

To bridge long distances of radio transmission, *repeaters* can be used. These form a node in the mesh network, forwarding the data received from one remote device to the next.

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4. Package Content

|	Receiver 868	Repeater 868
Equipment	✓	✓
Mounting hardware (rail, screws, tape)	✓	✓
Power Supply Unit (Meanwell, Model No: GS06E-1)	✓	✓
Network cable(s)	✓	
Operating Instructions	✓	✓

5. Installation

5.1. Attaching the *Receiver / Repeater*

1. Attach the rail to the desired position using either screws or adhesive tape. The position should be selected such that the *receiver / repeater* can be supplied with electrical power.

Note the following points when selecting the position:

ℹ️	• not inside a metal housing (e.g. metal cabinet) • at least 0.5 m away from large metallic objects (e.g. heating radiators or ventilation shaft) • away from danger zones, where the device could be damaged (e.g. behind a door where mobile beds could hit, …)

2. Click the *receiver / repeater* onto the rail by mounting it from the top of the rail and then press the bottom into the rail until it clicks.
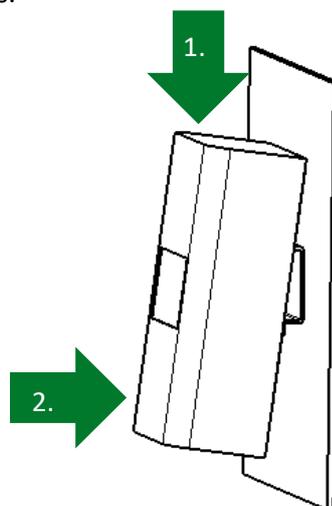
5.2. Connecting the Cables

1. Plug the power adapter cable into the provided connector.
2. Then plug the power adapter into an electrical outlet.
3. Once the *receiver/repeater* is powered, the LED lights up.
4. Connect the receiver to the server using the network cable.

i	Repeaters do not need to be connected to the server.

5.3. Removing the *Receiver / Repeater* from the rail
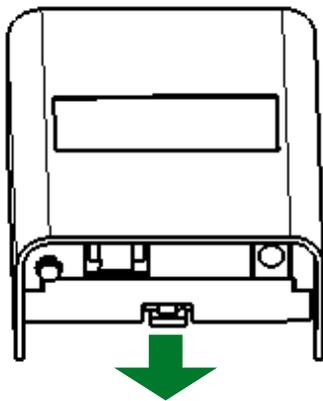
To release the *receiver / repeater* from the rail, the eye below the outlet-opening must be pulled down slightly with a hook or a screwdriver until the *receiver / repeater* can be tilted upwards.

6. Commissioning

6.1. Receiver-868

The receiver must be configured for integration into the local IP network (LAN). This is done with the software tool *"Wireless Server Manager".* The *"Wireless Server Manager"* is installed together with the software *"WirelessServer".* Operation and configuration are described in the instructions for *"WirelessServer".*

6.2. Repeater-868

As soon as the repeater is powered via the power supply plug, it is ready. The repeater will automatically connect to the mesh network (radio network) and does not need further configuration.

i	The repeater does NOT need to be connected to the IP network.

7. Technical Specifications

Receiver-868	
Model	*Mobility Monitor Receiver-868 Models 090*
Operating voltage	5 Volt DC
Max. Power	max. 1000 mA
Power Supply	100-240 V / 50-60 Hz
Expected life	5-10 years
Housing protection	IP33 Protected against solid foreign objects with diameters > 2.5 mm Water resistant against falling water up to 60 ° against the vertical
Radio data transmission	869.525 MHz / 27 dBm
Wireless Protocol	Proprietary (based on TinyMesh)
Ethernet	100 MBit
Power over Ethernet (PoE)	no (optional)
IP protocol	IPv4 (IPv6 is not supported)

Repeater-868	
Model	*Mobility Monitor Repeater-868 Models 091*
Operating voltage	5 Volt DC
Max. Power	max. 1000 mA
Power Supply	100-240 V / 50-60 Hz
Expected life	5-10 years
Housing protection	IP33 Protected against solid foreign objects with diameters > 2.5 mm Water resistant against falling water up to 60 ° against the vertical
Radio data transmission	869.525 MHz / 27 dBm
Wireless Protocol	Proprietary (based on TinyMesh)

8. Type Plate

The type plate of the receiver / repeater is located on the back side of the housing.

9. Declaration of Conformity
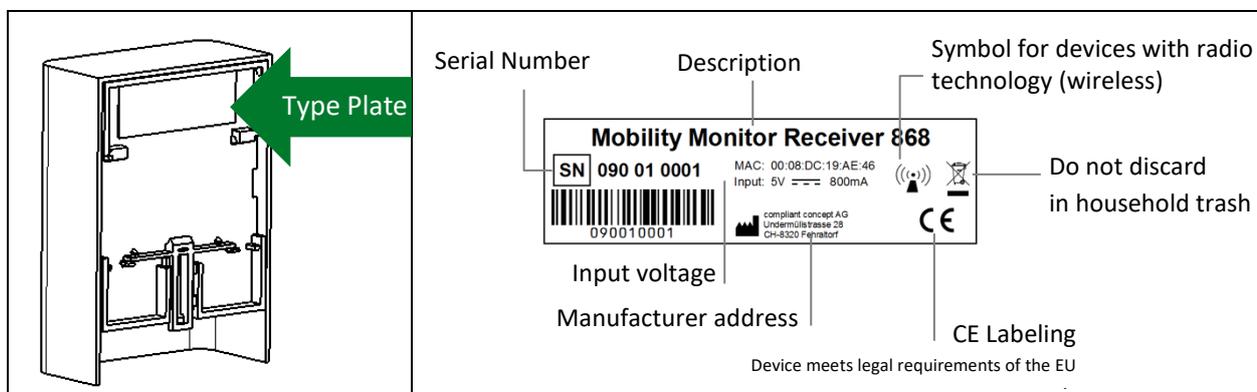
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$C\,E$

EC-Declaration of conformity
CE-Déclaration de conformité
EG-Konformitätserklärung

We · **compliant concept AG** declare under our sole responsibility that the products
Nous · Undermülistrasse 28 déclarons sous notre seule responsabilité que les produits
Wir · 8320 Fehraltorf, Switzerland erklären in alleiniger Verantwortung, dass die Produkte

| Mobility Monitor | • | **Receiver-868** | • | Models 090 |
| Mobility Monitor | • | **Repeater-868** | • | Models 091 |

to which this declaration relates, are in conformity with the requirements of the following directive
auxquels se réfère cette déclaration, sont conformes aux prescriptions de la directive
auf die sich diese Erklärung bezieht, konform sind mit den Anforderungen der Richtlinie

- **R&TTE Directive 1999/5/EC**

Furthermore, the products comply with the following standards and recommendations
De plus les produits sont conformes aux normes et recommandations suivantes
Weiter entsprechen die Produkte den folgenden Normen und Empfehlungen

- **EN300 220-2 V2.4.1**
- **EN301 489-1 V1.9.2**
- **EN301 489-3 V1.4.1**
- **EN60950-1(06) / A11(09)**
- **EN55022**
- **EN55024**

compliant concept AG, Fehraltorf, 20.05.2015

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10.   How to Reach Us

Questions regarding *Mobility Monitor* or *Mobility & Care Manager*? We provide technical support by phone or email.

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                          http://www.compliant-concept.ch/de/support

Change History

Version	Language	Release Date	Change	Translated from		Prepared	Reviewed	Approved
				language	revision			
1.1	EN	14.07.2015	First Version in EN	DE	1.1	kgi	utu	kst
1.1.1	EN	06.04.2017	PDXpert Number added			Jdo	Men	Men