INSTALLATION MANUAL

Index

1 General Safety Regulations

CAUTION: ***Strictly comply with the indications and diagrams in this manual when connecting the device.***

For proper use, we invite you to take the following precautions:

- ***don't expose this device to sources of heat, corrosive materials, water, steam or keep it in damp places;***
- ***do not use in presence of water;***
- ***don't expose this device to risk of impact or shock;***
- ***the BridgeWay WMBus device must be installed inside an electrical wall mount enclosure or inside a specialized personnel only area;***
- ***in the final installation the BridgeWay's case mustn't be accessible;***
- ***the BridgeWay WMBus device must to be connected after the main switch or after an easy to access signle epole switch with 3mm contact clearance identified as the "BridgeWay device on/off switch";***
- ***the BridgeWay WMBus device must be installed by specialized and qualified personnel only;***
- ***do not touch the exposed electrical circuits. The contact may cause an electric shock;***
- ***connect the device only with approved accessories. Don't connect incompatible products.***

2 Disposal

Waste of Electrical and Electronic Equipment (WEEE)

Don't dispose among generic waste but collect separately for recycling and disposal operations according by law.

3 Overwiev

Interfaces

- 1 Ethernet LAN RJ45 interface
- 1 Mini USB connectors comunication as virtual COM)
- 2 868/869 MHz interfaces

Overview

- Supports point-to-point communications
- LoRa™ 869 MHz Interface
- Wireless MBus™ Interface (868 MHz)
- 32-bit i.MX28 CPU core (CPU Module)

Typical Applications

- Monitoring and Control

Description

The BridgeWay WMBus is a device for Condominio 102 project and it's a bridge between two 868/869 MHz interfaces and TCP/IP over Ethernet.
With the Ethernet RJ45 we are able to manage and communicate with the 868/869 MHz local nets through normal Web applications.
For this configuration the CPU module is a 32-bit i.MX28 Applications Processor supported by Wireless MBus™ and LoRa™ for two different 868/869 MHz nets.
This Device can be used for Ethernet LAN remote monitoring applications ranging from simple proprietary point-to-point connectivity or to a complete mesh networking.

4 Technical Specifications

Characteristics	Ta=25°C			Units
	Min.	Typ.	Max.	
Power Supply	220	230	240	Vac@50Hz
Operating current	-	-	30	mA
Temperature range	-10	-	45	°C
868 MHz LoRa Modem (Mode MC6)	**Min.**	**Typ**	**Max.**	**Units**
Operating Frequency	865,00	-	868,00	MHz
Bandwidth	125	250	600	kHz
Channels	15	9	4	N.
Sensitivity	-	-105	-	dBm
TX Output Power	-	-1,7	-	dBm
Range (indor)	-	10	-	m
868 MHz LoRa Modem (Mode SC20)	**Min.**	**Typ**	**Max.**	**Units**
Operating Frequency	869,40	869,525	869,65	MHz
Bandwidth	-	125	-	kHz
Channels	-	1	-	N.
Sensitivity	-	-105	-	dBm
TX Output Power	-	12,3	-	dBm
Range (indor)	-	30	-	m
868 MHz LoRa Modem (Mode SC14)	**Min.**	**Typ**	**Max.**	**Units**
Operating Frequency	869,7	869,850	870	MHz
Bandwidth	-	125	-	kHz
Channels	-	1	-	N.
Sensitivity	-	-105	-	dBm
TX Output Power	-	5,3	-	dBm
Range (indor)	-	20	-	m

868 MHz LoRa Modem (Mode SC6)	Min.	Typ	Max.	Units
Operating Frequency	869,7	869,850	870	MHz
Bandwidth	-	125	-	kHz
Channels	-	1	-	N.
Sensitivity	-	-105	-	dBm
TX Output Power	-	-1,7	-	dBm
Range (indor)	-	10	-	m
868 MHz Wireless MBus Modem (Mode T)	**Min.**	**Typ**	**Max.**	**Units**
Operating Frequency (GFSK)	868,9	868,95	869,00	MHz
Sensitivity (CER<10-3)	-	-101	-	dBm
Channels		1		N.
TX Output Power	-	13	14	dBm

Table 1: Technical Specifications

5 Dimensions

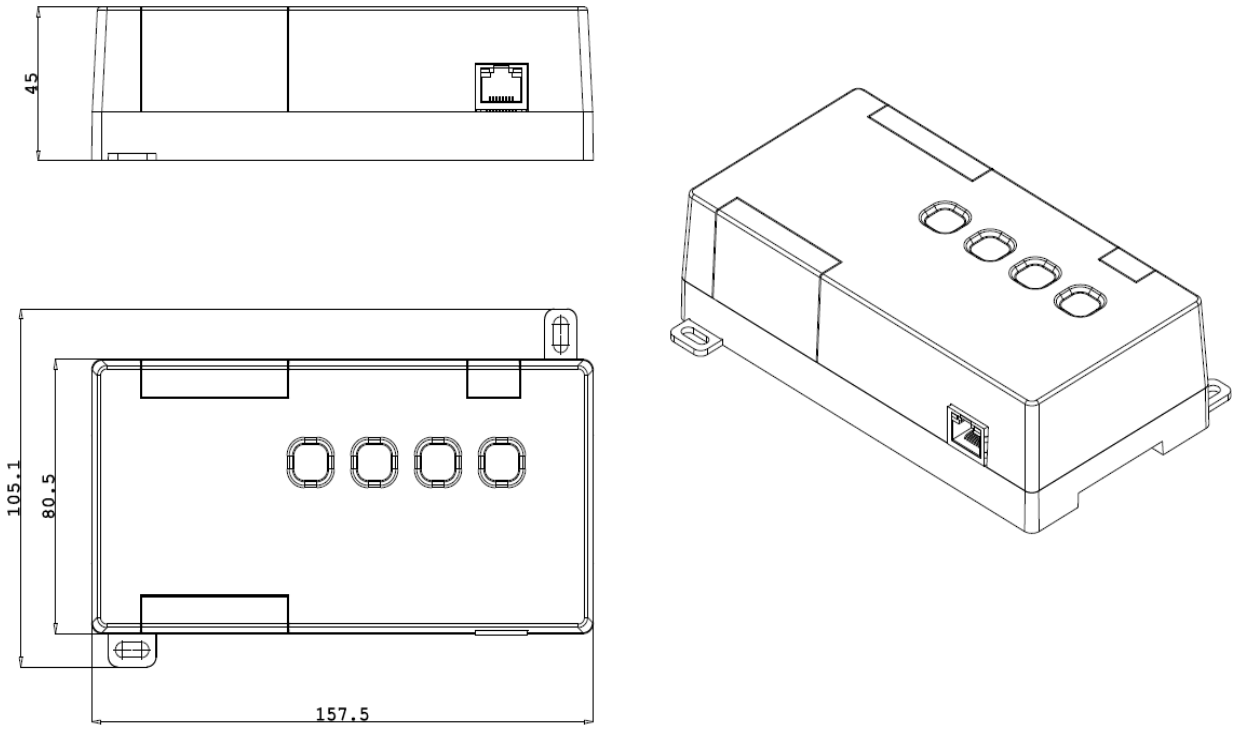

Figure 1: BridgeWay WMBus dimension outline

6 Connectors

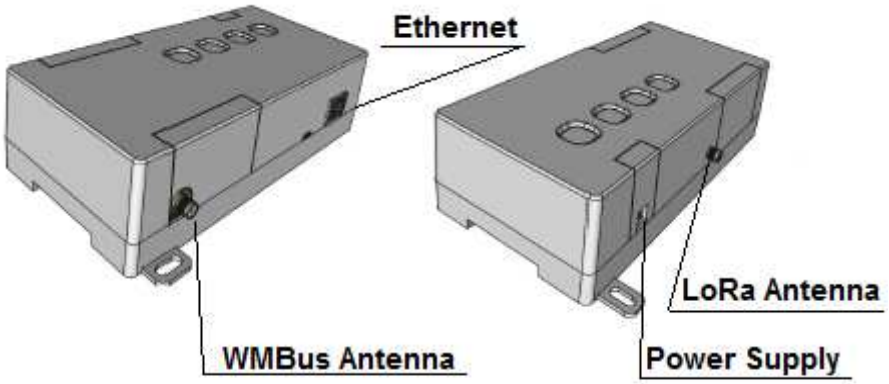

Figure 2: BridgeWay WMBus connectors

7 Device Components

Figure 3: BridgeWay WMBus

Figure 4: Ethernet cable

Figure 5: Stilo Antenna

8 Connection Diagram e Installation

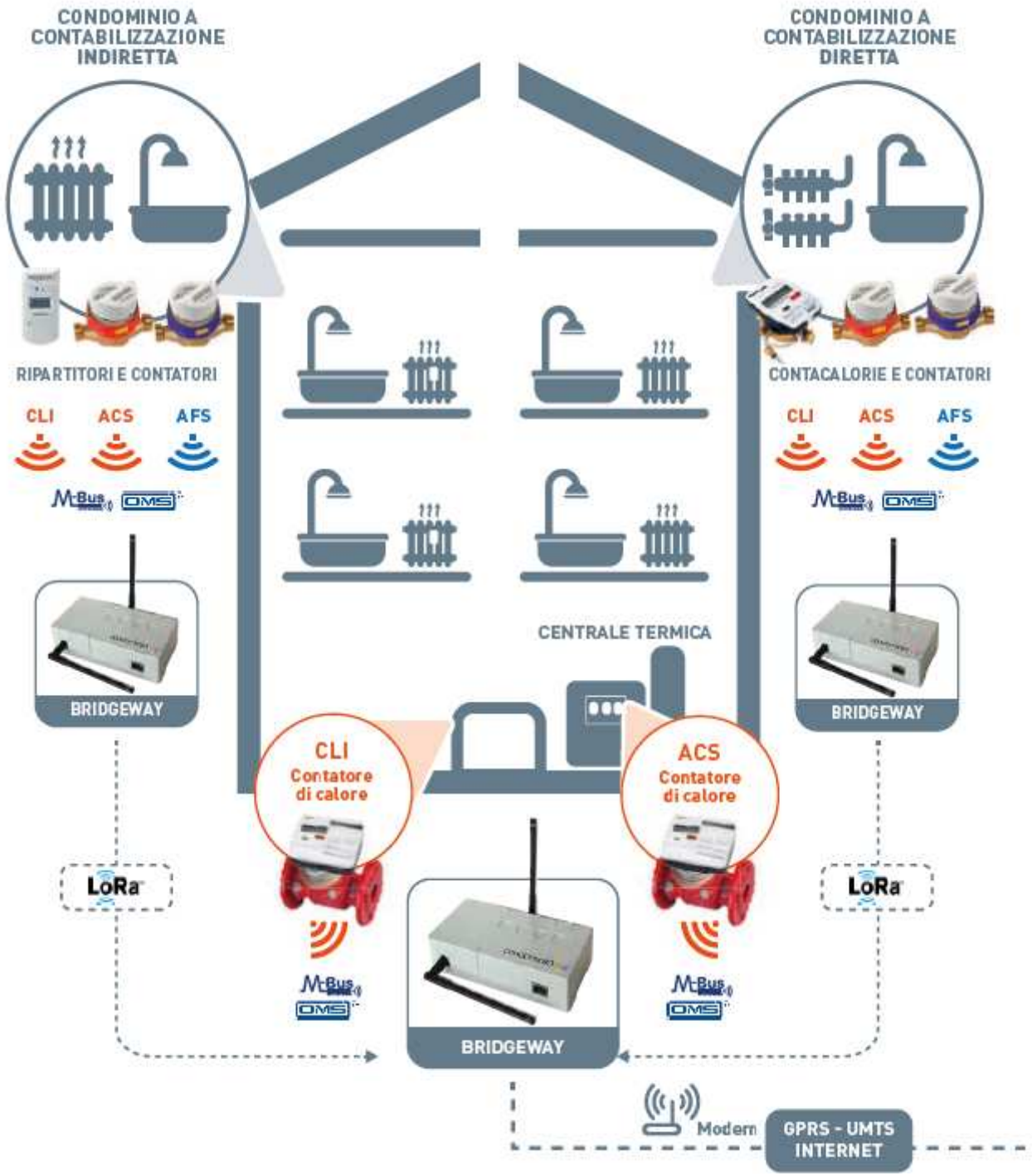

Figure 6: BridgeWay WMBus connection diagram

The BridgeWay WMBus device must to be connected after the main switch or after an easy to access signle epole switch with 3mm contact clearance identified as the "BridgeWay device on/off switch".

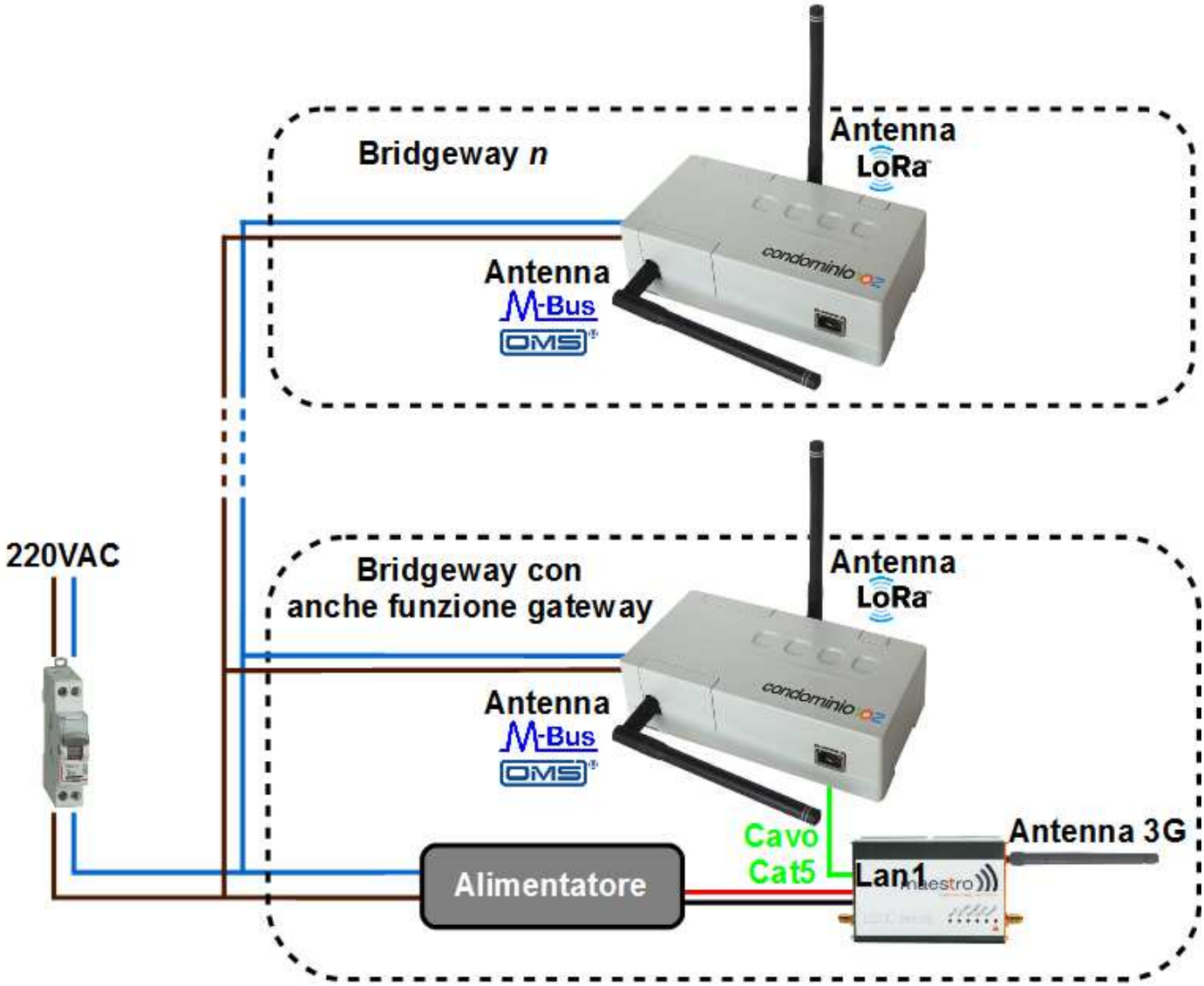

Figure 7: BridgeWay WMBus installation diagram

Figure 8: Installation inside an electrical wall mount enclosure

Outside a specialized personnel only area the installation is allowed only inside an electrical wall mount enclosure (showed in picture)

Figure 9: Installation inside a specialized personnel only area on the cover of small wall mount enclosure

Installation inside a specialized personnel only area is possible without wall mount enclosure, in particular directly on the wall with 2xM6 plastic expand plug (showed in bottom picture) or indirectly (showed in top picture) on the cover of small wall mount enclosure.

Figure 10: Installation inside a specialized personnel only area directly on the wall with 2xM6 plastic expand plug

9 Revision History

Date	Revision	Description
11/07/17	1	First Release
27/03/19	2	"General Safety Regulations" mod.
03/04/19	3	"General Safety Regulations" mod.
24/04/19	4	" 8 Connection Diagram e Installation" mod.

Table 2: Revision History

List of Figure

CEDAC SOFTWARE Srl Via Toscana, 3 40035 Castiglione dei Pepoli (Bo) Italy
Tel +39 0534 93811 Fax +39 0534 93899
Internet: www.cedac.com E-mail: commercialehw@cedac.com

List of Table