

# **BrunataNet**

## **GateLAN Bbus/RS485**

### **(type 1)**

Installation guide

edition 2.0

UK-QB 101474/18.04.2013

*Brunata a/s is a Danish owned company. We have more than 90 years of experience in delivering heat cost allocators, consumption accounts and meter services. Today meters are often remotely read with access to the internet. We have a quality control system fulfilling DS/EN ISO 9001 and 14001.*

# **Brunata**



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Appendix: BrunataNet Components' List

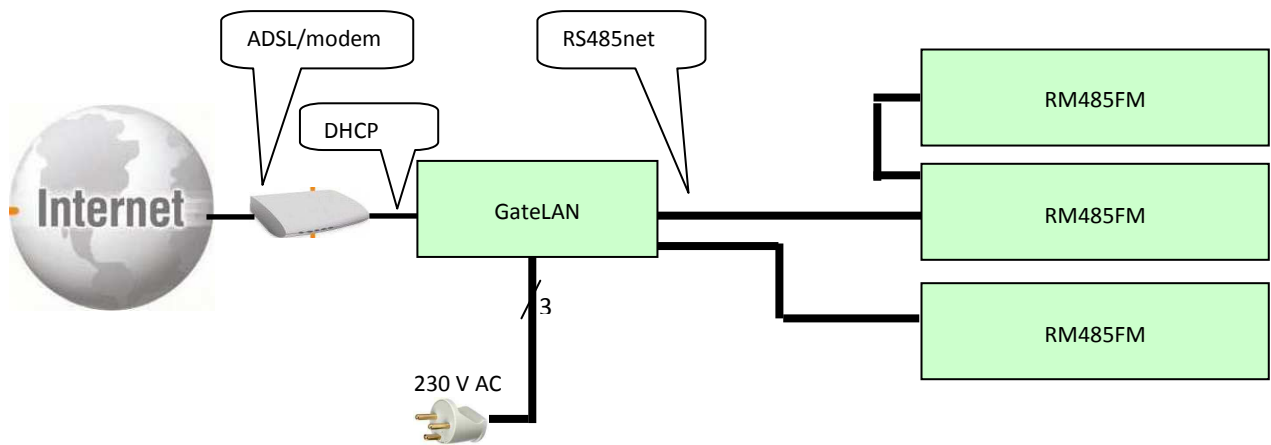
## 1.0 Introduction

### 1.1 General description

The GateLAN Bbus/RS485 is plugged into 230V and an Ethernet with dynamic IP addressing DHCP through which access to the Internet can be achieved.

Up to 64 receivers can be connected to the GateLAN Bbus/RS485, as long as the total cable length does not exceed 1000 meters.

In addition, the supply voltage in the receivers network must not drop below 14V.



### 1.2 Tools

To install the cable to the RS485net in the GateLAN Bbus/RS485 a LSA-tong must be used.

Brunata recommends the Krone LSA Plus tong (item no. 061040C).



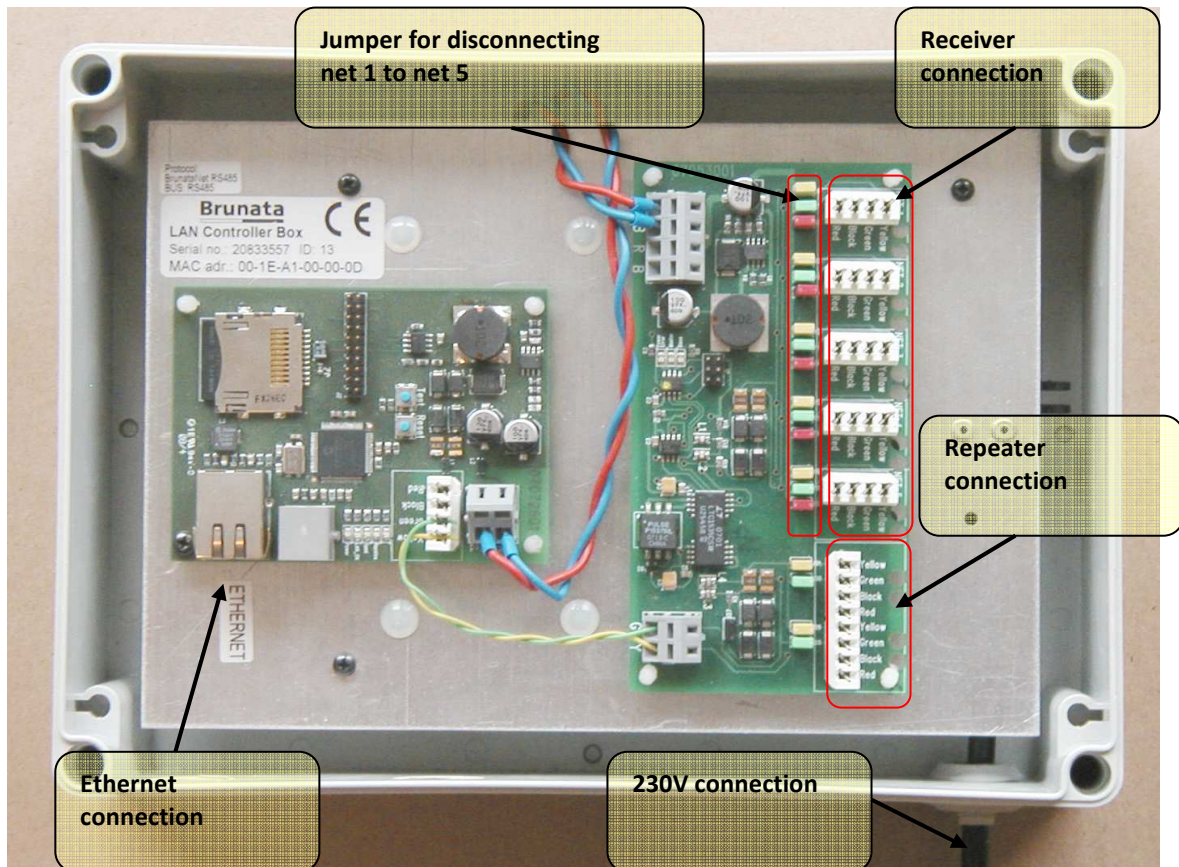
### 1.3 Connecting the GateLAN Bbus/RS485

The local network or the Internet is connected to the Ethernet plug.

The receivers are connected to the five LSA terminals.

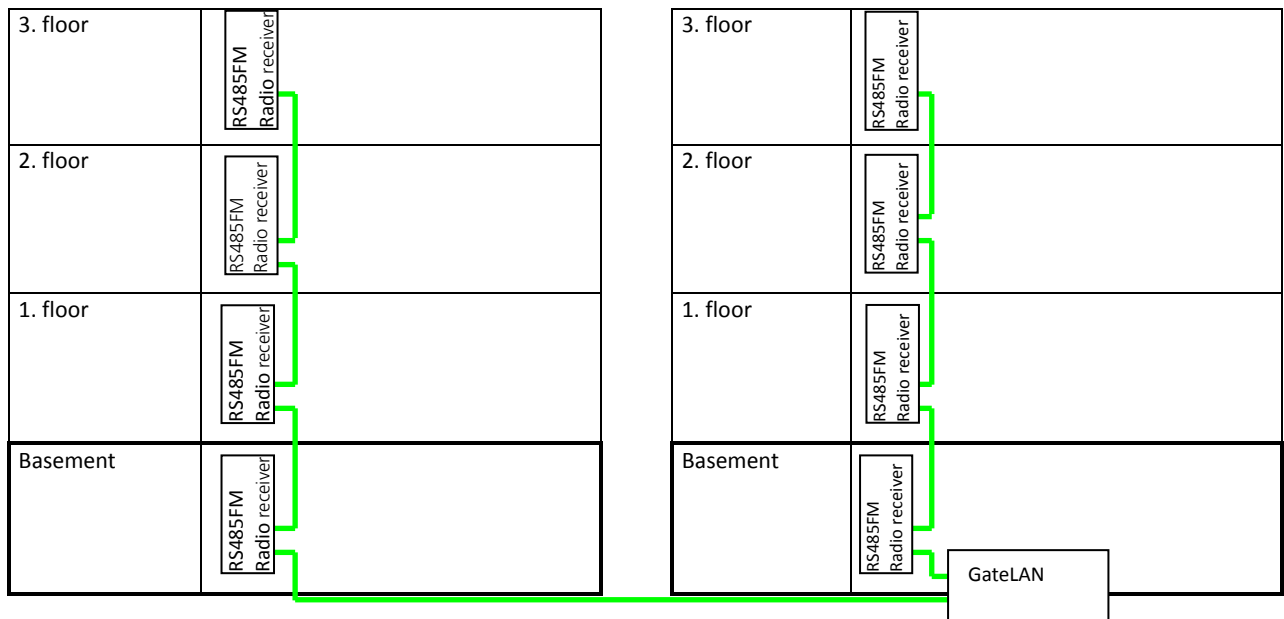
The eight-pole LSA terminal is used to connect repeater boxes.

When all the meters are connected, the GateLAN Bbus/RS485 is plugged into a 230V power point.



## 2.0 An example of a Brunata RS485net with GateLAN Bbus/RS485

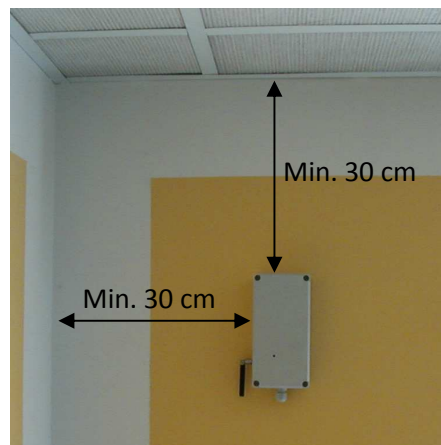
The sketch below is an example of how a Brunata RS485net with GateLAN Bbus/RS485 can be established in two buildings with three floors.



### 3.0 Placement of the RM485FM radio receivers

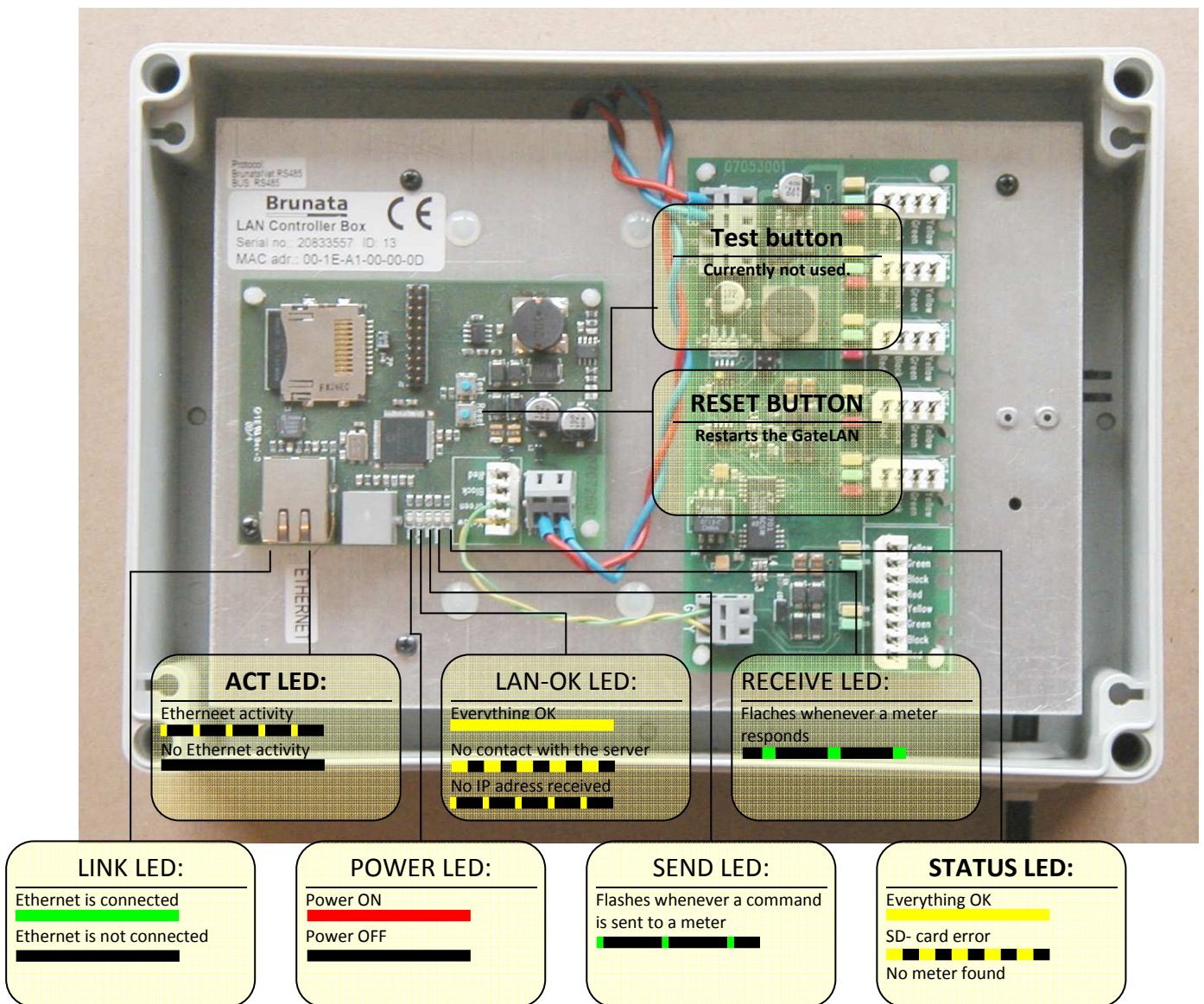
The radio receivers must be placed in a way so that they can receive radio telegrams in the best possible way. This is achieved by observing the following rules:

- The box should always be placed as far away from a corner as possible. Never closer than 30 cm. There will be a significant improvement of reception conditions if the radio receiver is moved from 30 cm to 50 cm away from a corner. If moved further than 50 cm the improvement in reception conditions will not be essentially better.
- Do not place it in a closed iron cabinet.
- The GateLan-box should never be placed next to a refrigerator or other cupboards with big iron surfaces, which can block the radio telegrams from the allocator.



This picture is an installation example of a radio receiver.

**4.0 LEDs and buttons on the GateLAN Bbus/RS485:**



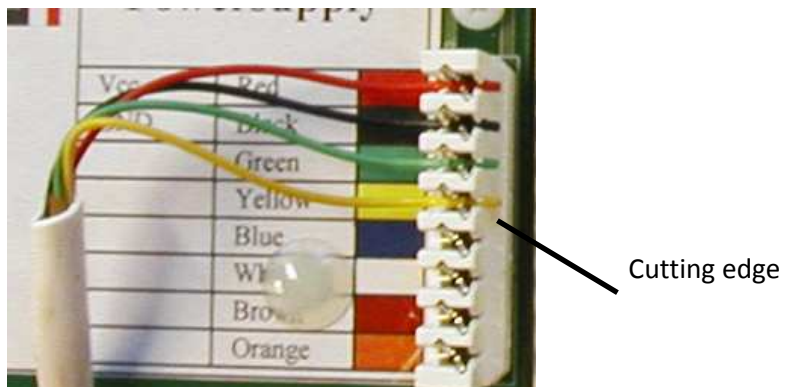
### 5.0 Fitting of cables

The Brunata RS485net cable consists of four conductors with the colours: Red, black, green and yellow.

A label showing how to connect the different conductors is attached next to the LSA connector.



When connected to the LSA-connector the conductors must turn towards the cutting edge on the LSA-connector.





## 6.0 SMS Text commands to the GateLAN Bbus/RS485

If the GateLAN is correctly connected to the Internet and is connected to Brunata's server (the LAN-OK LED is remains lit), it is possible to send SMS text commands to the box.

These SMS text commands are sent to telephone number: **+45 27 80 88 24**.

You need a password to use the SMS service. You can obtain a password from your local Brunata office or from the Product Management Instruments support on telephone number +4577 77 72 86 or by e-mail [instruments@brunata.com](mailto:instruments@brunata.com)

The text command must be constructed as follows: **[password] [ID no. of the box] [command]**

### Standard commands:

Text command	Description
hardboot	Restarts the GateLAN Bbus/RS485 immediately
version	Inquires about the software version in the GateLAN Bbus/RS485
units	Writes out a list of the receivers found by the GateLAN Bbus/RS485
status	Writes out various status flags. These describe roughly the same facts as can be read on the LEDs if you have physical access to the GateLAN Bbus/RS485

An example of a text command is shown below where the sender wants to know the software version in GateLAN Bbus/RS485. The box has ID number 10, and the actual password:

Text command	Text reply
password 10 units	10 2.40

## 7.0 Check and register

### 7.1 Which elements does the check contain?

When the network is established, you must check that it works. The check consists of two parts:

- Does the GateLAN Bbus/RS485 have contact with the server at Brunata?
- Did the GateLAN Bbus/RS485 find all the receivers?

### 7.2 Does the GateLAN Bbus/RS485 controller have contact with the server at Brunata?

First check if LAN-OK LED is lit constantly. Then send a text command to the GateLAN Bbus/RS485. If these two checks are successful, the GateLAN Bbus/RS485 can send data to the database at Brunata.

### 7.3 Did the GateLAN Bbus/RS485 find all the receivers?

The following text command is sent to the GateLAN Bbus/RS485 to check if it has found all the receivers included in the network. See below for an example of a text command, where the sender wants to know if all the receivers have been found in GateLAN Bbus/RS485. The box has ID number 10 and a password:

Text command	Text reply
password 10 units	10      4167 4105 5623

## 8.0 Registration of components in the network

In order to monitor the network, it is **very important** to register all the components in the network. The ID numbers of the GateLAN box, the receivers and their location in the building are noted in the form "BrunataNet Component List". A sketch of the composition of the network can be drawn on the back of the form, if required.

The form is passed to your local department, which will make sure that the component data are registered in WebMon.

## 9.0 Technical support

If you have any questions with regard to the points above, please do not hesitate to contact Product Management Instruments support at:

Contact information:

Tel.      +45 7777 72 86

E-mail: [instruments@brunata.com](mailto:instruments@brunata.com)

<b>BrunataNet Components' List</b>					System no.
					Pages of
Installation date	*	Serial no. / ID no.	Address	Network location	Comment

\* = Component type                      Service employee: \_\_\_\_\_      Tel. no: \_\_\_\_\_      Date: \_\_\_\_\_

**L** = GateLAN, **M** = RS485FM receiver, **N** = RS485FM receiver v2                      See reverse