RG SERIES INSTALLATION MANUAL

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HISTORY OF CHANGES

Rev.	Date	Description of changes	Author	Approved by
V0.1	1.11.2019.	First version	Nikola Stevic	
V0.2	25.12.2019	Review	Nikola Stevic	-
V0.3	23.03.2020	Wiring example added	Nikola Stevic	

Content

1 Introduction

Thank you for purchasing RG series device.

This document is a self-contained installation manual. In case of any doubts please go through What if the device does not work section. If this does not help, please use contacts indicated in the contacts section to reach out for support.

2   About the Product

RG glass panels are a Modbus slave programmable devices that enable various control functions in residential and hotel systems.

The device consists of three parts presented as on the Figure 2-1 Front, Expander and Frame:
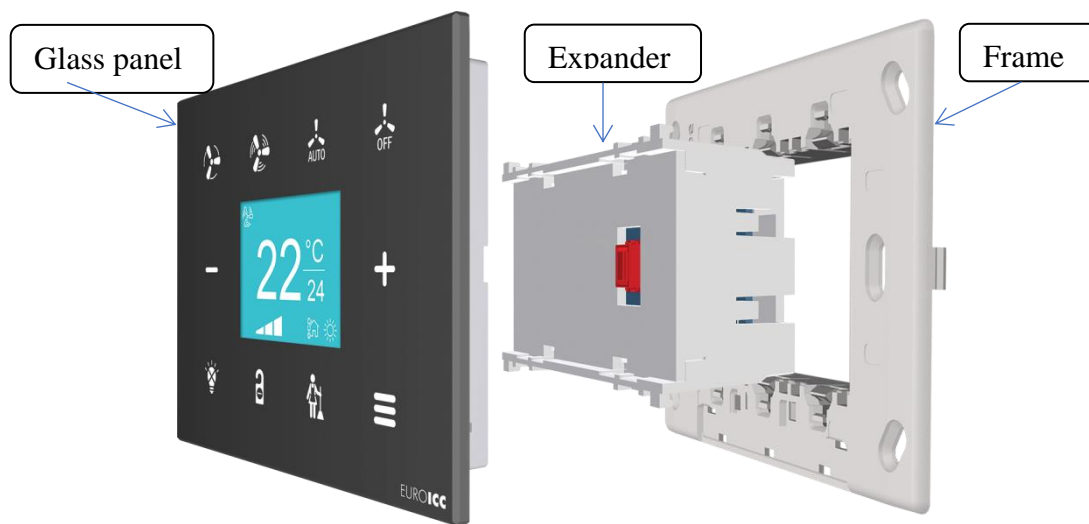
- Glass panel

- Expander

- Frame

Figure 2-1 Front, Expander and Frame

Figure 2-2 RG Expander shows the terminals of the product available on the rear side of the expander:

1. USB connector
2. The main screw terminal connection block
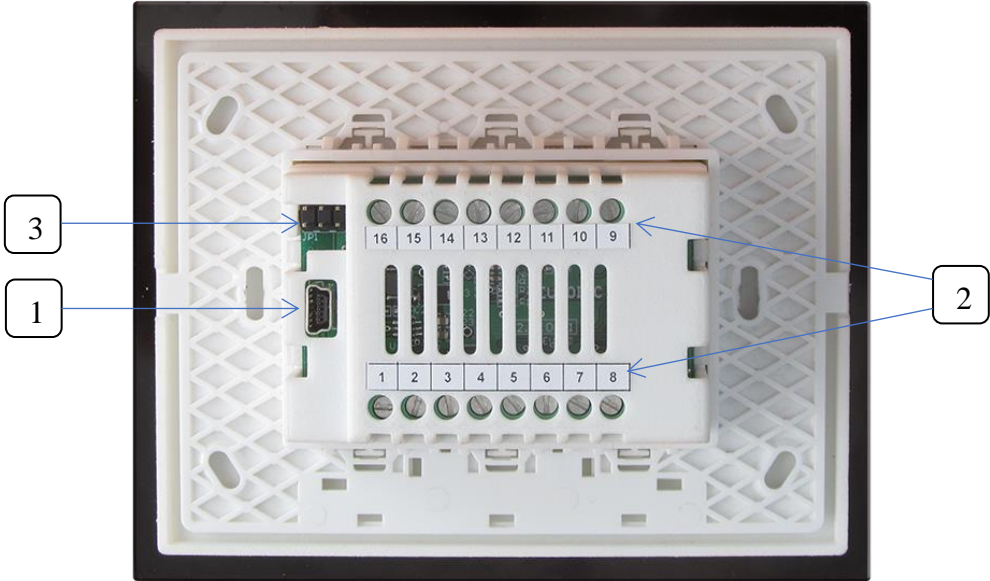3. Jumpers for RS485 termination and polarisation

Figure 2-2 RG Expander - rear view

3   Prerequisites

To install the product in a hotel room and deploy it within EUROICC GRMS, the back box with correct cabling needs to be present in a wall. The advised position of the back box foreseen for the installation is 1.5m above the floor of the room. If position is different from the suggested, it is the responsibility of the installer to make sure the unit operates to desired standards.

The device is to be mounted in a standard 3M wall inserted back box or similar back box.

Wall surface where intended for the install needs to be flat in the area around the back box. If this is not the case, the glass panel might not be able to establish a reliable contact with the expander.

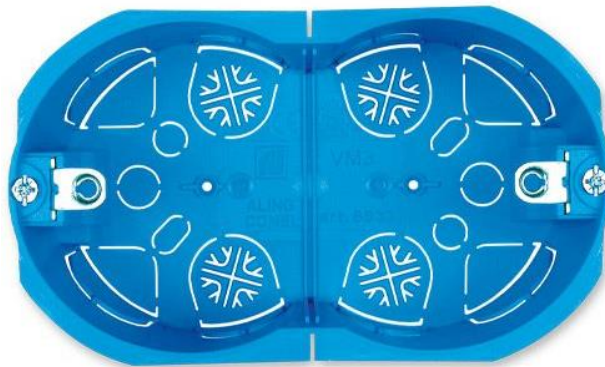Figure 2 shows the example of back box for hollow wall.

Figure 3-1 Back box for hollow wall

Note: Type of the mounting box differs if the wall is solid or hollow.

Besides the back box, the following tools are required to install the product:
   I.   Electrical or manual drill;
   II.   General purpose drill of the radius 7mm;
   III.   Flat head screwdriver with 4mm wide or similar head
   IV.   Tools for electrical wiring

4   Cabling and Connection Diagram

The correct way to connect the product to the rest of the guest room management system is given in Figure 4-1 RG wiring.

The required wiring is composed of 24VDC power supply and referent ground terminal, together with RS485 two wire link and other command signals depending on the application.
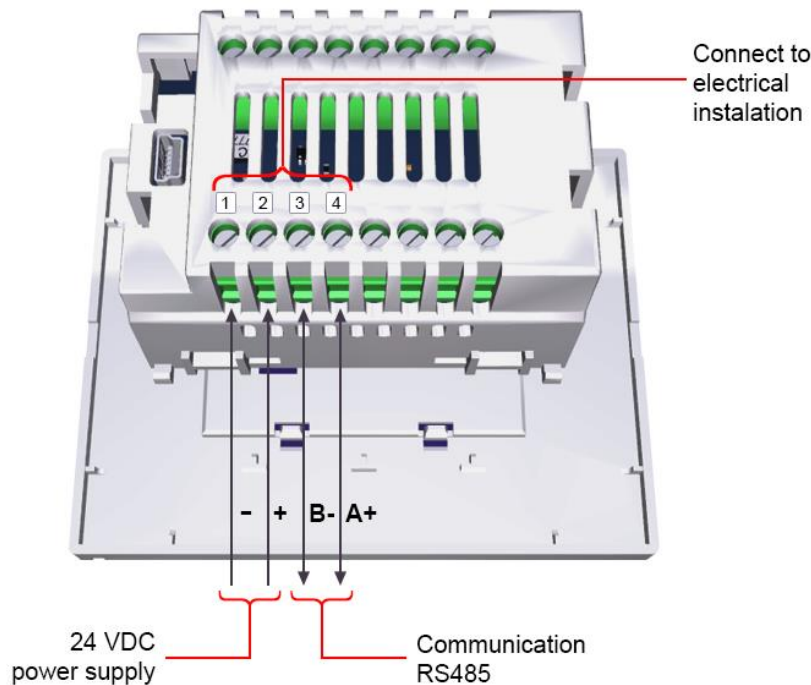

Figure 4-1 RG wiring

Wiring quality will influence the device performance. Therefore, opt to use high quality cabling. The recommended diameter of the wire core is in the range of 0.25 to 0.5 mm^2. Both solid and stranded wires can be used. In case of stranded wires, it is advised to use pin terminals.

Advised wire coloring:

- Use black color for referent ground connecting
- Use red color for live 24VDC voltage

Make sure the connections to the screw terminals are reliable to minimise the potential impact of wear and tear.

In room applications where the cable distances are short, both the RS485 communication line and the power supply are not jeopardized by the voltage drop. In case of applications where the distances are more than 50m please advise Euroicc technical support.

Important: Do not use electric screwdriver. It can deliver significant momentum to the main screw terminal and damage the unit permanently.

5 Communication Parameters

As with any other Modbus slave unit, a specific slave address together with Modbus connection parameters need to be set for RG series products. These need to be assigned in a way to match the specific installation needs. Therefore, the parameters, in a generic case are installation dependent. The values assigned by default are listed in the table below.

Parameter	Default value
Modbus type	RTU Slave
Data bits	8
Parity	None
Stop bits	2
Slave address	*1
Baud rate	38400

*Each type of RG series has default slave address according to the table below.

Device	Default Address
RDA	1
CSA - CRA	2
CHA	3
KPA	4
KTA	5

The default values are suitable for most of the applications. However, if a change is required, these can be changed using jPLCPRo programming tool, available from our support.

In case the device is working in a stand-alone configuration the communication parameters are irrelevant.

6   Installation Steps

Before proceeding to installation of RG device make sure the back box is mounted and the correct wiring is present and accessible within the box.

Afterwards, follow the steps below to perform the installation.

Step 1.   Mount the plastic frame on the back box

Step 2.   Connect the wires to the expander according to the wiring diagram

Step 3.   Arrange the connected wires in the expander mechanics as on Figure 6-1 RG wire position example and put the expander in the frame
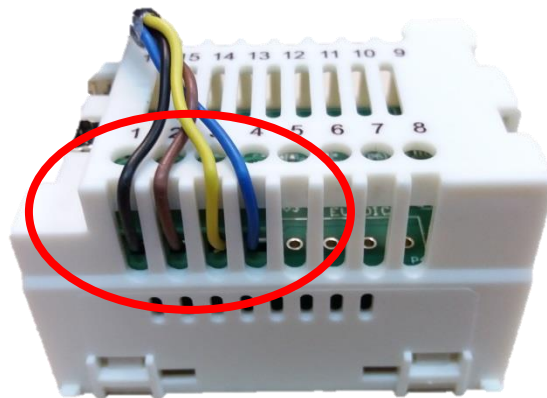
Figure 6-1 RG wire position example

Step 4.   Connect the front panel to the expander. A correct installation is validated by a click sound of connection between the expander and the glass panel.

In case the horizontal glass panel edges are not leveled properly, correct that by loosening the screws on the frame and adjusting the frame rotation.

It is sole responsibility of the installer to make sure no damage occurs to the units during the installation process; thus, a special care is advised.

6.1   Example Of The Electrical Wiring Diagram

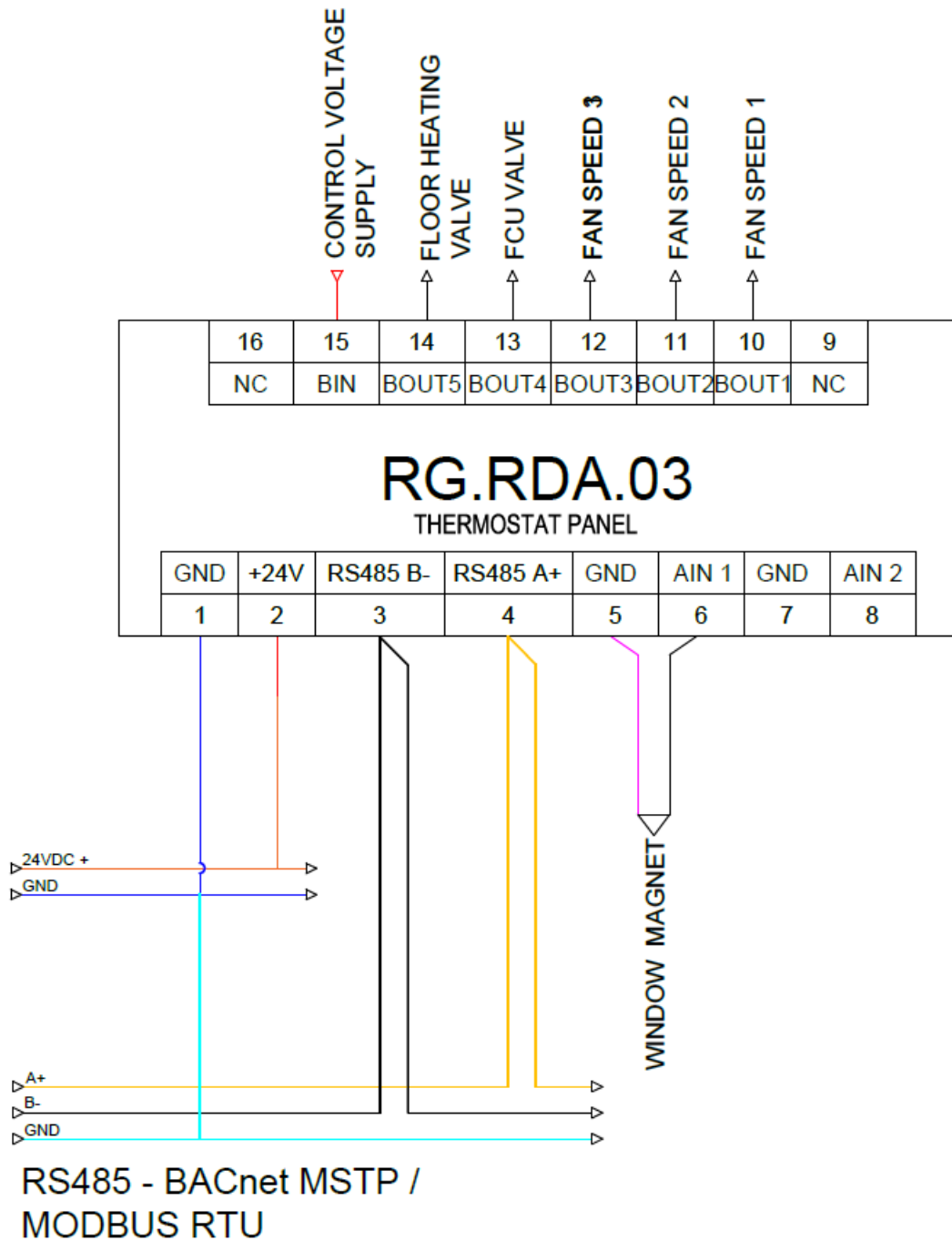On the Figure 6-2 RG.RDA.03 wiring example is a wiring example of RG series panel with IO extension.

Figure 6-2 RG.RDA.03 wiring example

7   Validation of correct operation

Upon completed installation, the unit should be integrated to the rest of the system. The list of the steps to be followed to confirm the correct RG panel operation is:

- Power up the system by switching on the main room controller or 24VDC power supply

- The buttons of RG device will light up or the display will activate in case of RG.RDA device

- If the communication is enabled the device will operate according to the specification and it will not show communication error indication

- Check other functions as per device specifications and validate the operation

8   What if the device does not work?

The following steps are advised to validate the reason for device not to work and ways to mend such a situation:

a) Double check the correct wiring. If something is wrong fix it

b) Measure the power supply voltage and current at the device end. The cable must be able to supply enough power, otherwise it must be replaced

c) Confirm the Modbus parameters have been set correctly. This is especially important if these have been changed to differ from the default settings

d) Confirm the correct configuration of application software with the rest of the Guestroom Management System. This might require a detailed analysis of behavior of every device within the system, inclusive of validation of applications running on system components, controllers and related

e) Repeat the validation procedure with a "known to work" RG unit. Then repeat the same validation procedure from the same position with a non-working unit. If the test is unsuccessful, get in touch with our support.

9   Contacts & Support

In a situation which requires further assistance, please use the following means to reach us:

- Standard support contact, which you have been in touch during the purchasing process
- Standard sales contact, which you have been in touch during the purchasing process
- Generic support contact, available via email: support@euroicc.com

Our support and sales personnel are available from 8am to 4pm c.e.t. during weekdays.