REGIS R-1-B and REGIS R-3-B– ACCESS or TIME AND ATTENDANCE CONTROLLER

The Regis is a controller with built-in proximity card reader, keypad and display. It is designed for residential and business buildings, offices, shops, etc. The controller can have 125kHz or 13.56MHz reading frequency.
The entire set-up procedure is carried out with the software. The controller allows access for up to 30000 users and saves 100000 events. If you bought the controller in time and attendance kit, then inputs and outputs cannot be controlled.
It can also be used as a Wiegand 26-bit reader, if needed.
The SDK is also available for this controller. If a user or software producer wants to develop its own application, please contact us.

TECHNICAL DATA

REGIS R	
REGIS R-1-B reading frequency	125kHz
REGIS R-1-B reading distance	Up to 10cm
REGIS R-1-B current consumption in standby mode	130mA
REGIS R-3-B reading frequency	13.56MHz
REGIS R-3-B reading distance	Up to 7cm
REGIS R-3-B current consumption in standby mode	160mA
Dimensions (mm)	90x133x19 (WxHxD)
Protection	IP54
Operating voltage	From 9V to 14V DC
Operating temperature	From -20°C to 60°C
Cabel	Flat cable 20cm
Display	OLED - 4x20 characters
Tamper	Accelerometer
Memory	30000 cards or codes 100000 events
Inputs	Door status Push button
Outputs	Transistor output for el. strike 0.5A
Clock	Real time clock, battery backup (max. ten hours)
Communication	RS485
Keypad	Numeric, illuminated, with gold plated contacts

CONNECTION CABLE

Wire-Color	Description/Wiegand 26-bit	Specification
1 – red	9-14V DC	Power supply
2 – gray	GND	Ground
3 – gray	El. strike output / Data 0	Max. 0.5A Active = GND
4 – gray	Alarm output/ Data 1	Active = GND
5 – gray	Door status switch input/ Buzzer input	Active = GND
6 – gray	Push button input / LED input	Active = GND
7 – gray	CA	RS485 A line
8 – gray	CB	RS485 B line

LED DIODES

Color	Description
Flashing red/green	Normal mode
Lit green	El. strike is unlocked
Lit red	Card has no rights

Power supply

The controller need's external power supply to operate. The Spider W40 power supply is sufficient to power two controllers and two 12V electric strikes or two 12V magnetic locks (0.5A). If you will use it as a standalone controller and low consumption electric strike (0.25A) you can use power supply Spider W5.

Voltage drops and cable signal interferences

When you connect the controller, use cable with a diameter of at least 0.22mm^2. If the cable length exceeds 25m, use one twisted pair of UTP cables for the positive (+) pole and one for the negative (-) pole. The cable length between power supply and the controller should not exceed 50m.
Take into consideration that a 0.22mm^2 cable has a resistance of approximately 9 ohm per 100m. The power supply at the end of cable should be a minimum of 9V. If you are using el. strike, it is highly recommended that the voltage drop is calculated. At greater distances, a thicker cable of 0.5mm^2 or more should be used wherever possible.
If the load is, for example, 0.5A (with el. strike) then, on the 0.22mm^2 cable voltage drop will be 4.5V at 100m. For the device with 60mA consumption, the voltage drop is 0.5V.

Reading distance depends on where the controller is installed. The presence of metal or interferences can significantly reduce the reading distance. **DO NOT** install the controller directly on metal surfaces and/or cover it with a metal cover.
It is **not recommended** to install controllers closer than **30cm** from each other in any direction. Otherwise, it may result in inaccurate readings or, indeed, in the controller **not reading at all**.

For the Regis R-3-B to comply with EMC directives (CE), you have to put ferrite core on the cable as close to the controller as possible, making two turns!

Inputs, outputs and environment

Inputs:
Inputs are realized with opto-isolators. The input is active, when pulled to ground with an open collector transistor or mechanical switch, which is connecting the input pin of the controller to the Ground.

Outputs:
Output has a pre-installed protection diode for an inductive load. It is also protected from current overload. The best way is to use a 0.25A el. strike or a 0.5A el. magnet, which has to be connected to the same positive pole (+) as the controller. Connect the negative pole (-) to the door strike output (wire 3). When the output is active it is pulled to ground. This can be changed with function 5 – negate output (for el. magnet).

Environment:
Do not install the controller on/in a place, where it can come in contact with water. You must assure good cable joints, protected against moisture, otherwise corrosion may damage the controller. Damage in such cases is not covered by the warranty.

Reading range:
The controller has a program algorithm that, at power start, sets parameters based on the installation environment, so as to ensure an optimal reading range. **DO NOT** install the controller directly on metal surfaces and/or cover it with a metal cover; it may stop working/reading. If you plan to test the controller and move it onto different surfaces, then you have to reset it (power off/on) on each surface.

ACCESS OR TIME AND ATTENDANCE CONTROLLER

Access controller

As an access controller, it is intended for controlling entries, exits and passes of users in the system and controlling sliding doors, ramp, el. strike, turning alarm on/off… It needs to be set with CODEKS software.

Time and attendance controller

As a time and attendance controller, it is intended to register the employee's arrivals and exits from work, lunch break, private and business exits, sick leave... It needs to be set with CODEKS software. In software you need to choose option "Time and attendance" for controller and reader. Set the software according to your requirements (time tables, users...) and send the tables. The keypad will serve for choosing different time intervals (private, business…).
The controller switches to access controller when tables are sent by the software or when it is set to mode 4 with function 9. Change the controller's address from 255 to any number between 1 and 254. If you have more controllers on the communication line, don't duplicate addresses. Add them one by one on the communication line, because every controller has address 255 by default.

Communication

RS485:
Connect the controller to the computer, with one of the power supplies, with communication converter, from the Spider family: Spider W5-USB, Spider W5-NET, Spider W40+NET.
The RS485 communication bus is used between the controllers and Jantar software. Up to 128 controllers can be lined up into one communication line. The maximum length of the communication line is 1000 cable meters. It is recommended that you use an FTP or S-FTP cable. Only a serial connection of controllers in a single communication line is allowed. **Star (parallel) connection is not allowed**.
All shields of S-FTP cables must be wired together and at **one point** connected to the earth. Individual connections to the earth are not allowed. Do not connect the shield of the cable to the ground of the controller.

In the event of problems in communication, a termination resistor needs to be added. We recommend using 120 Ohm resistors on each side of the cable. Converters are, on the RS485 side, protected with slow-blow fuses and transient voltage suppressors.

Changing back to standalone controller from access controller:
In the Codeks Device Manager software do the "Brainwash" of the controller. Address of the controller's switches back to 255.

ORDERING CODES

REGIS [box]-[card]-[software]
Box: **R**
Card: **1** – reading frequency 125kHz (cards)
3 – reading frequency 13.56MHz (cards)
Model: **B** – Black line

Code	Description
REGIS R-1-B	Access or time and attendance controller in **R** box, Frequency 125kHz, for CODEKS
REGIS R-3-B	Access or time and attendance controller in **R** box, Frequency 13.56MHz, for CODEKS

OTHER

Warranty only applies when the controller Regis is used with power supply or/and communication converter from the Spider family.

Please read through our warranty and disclaimer statements.

Connection scheme and additional support for the use of this product can be found on:
http://www.jantar.si/forum/en

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