User Manual

Access Unit Wireless 3000-U981-02

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Use only the antenna and DC power supply shipped with this device. Modifications not expressly approved by this company could void the user's authority to operate the equipment.

FCC ID: 2AGCT-U98102

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Introduction

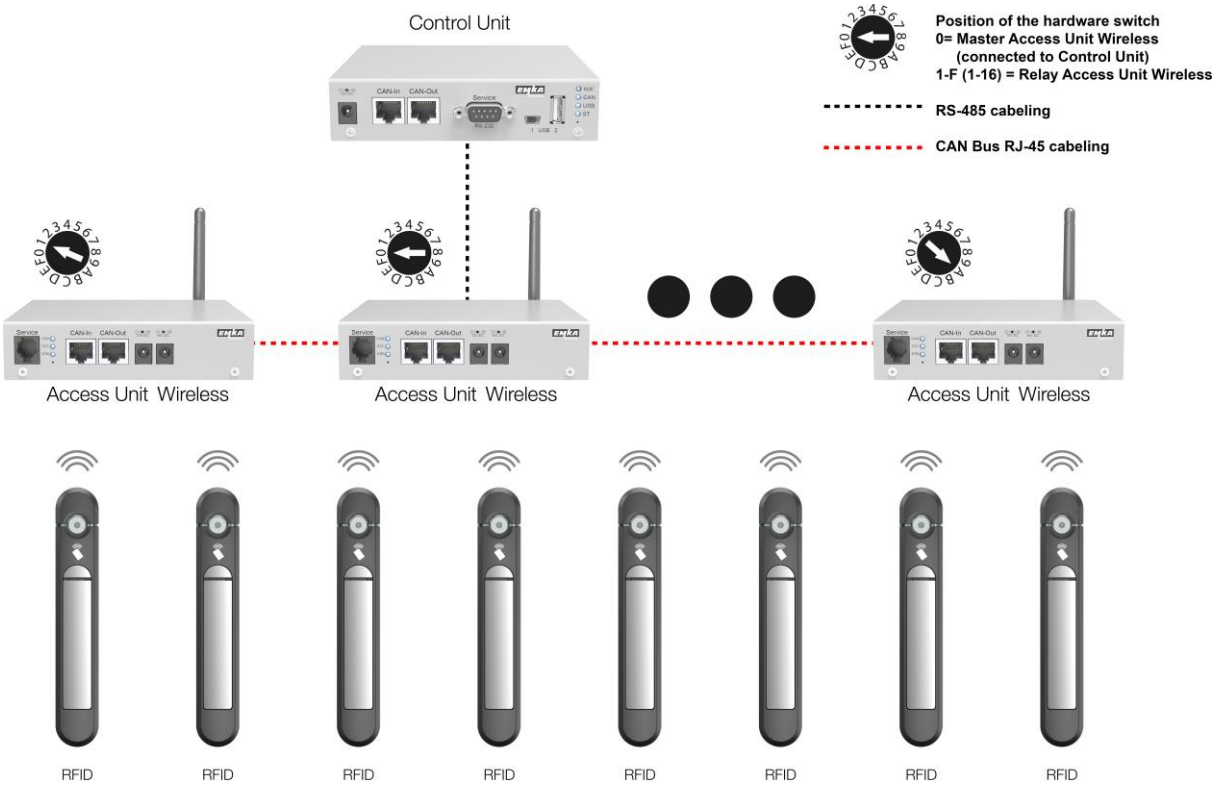
Access Unit Wireless 3000-U981-02

The Access Unit Wireless (AUW) is a module for the EMKA Electronics system and has to be controlled with a Control Unit (CU).
It communicates with the wireless Agent E handle (Agent) over radio frequency (868 MHz Europe and 922 MHz USA/SGP) and can control up to 1200 Agents.

Features

- Wireless Unit to administer Agent E Wireless in combination with Control Unit
- Administration of up to 1,200 doors in a wireless network via access units and Control Unit
- Unique Network ID of each MAUW prevents cross communication between Agents of different systems
- Max. 16 Access Units Wireless per Control Unit can be added to increase communication area
- Frequency 868 MHz (version Europe) or 922 MHz (versions USA, Singapore)
- Two Independent power inputs for redundant supply
- Power distribution through CAN and RS-485 for easy installation
- Configuration and monitoring is managed by the Control Unit

System Overview



Agent E Wireless

The CU has to be connected over CAN Bus with the AUW, this AUW is the Master Access Unit Wireless (MAUW) and manages the whole information flow between handles and CU.
Depending on the shape and size of the area that has to covered, the communication range can be extended, by adding additional AUWs to the MAUW. Up to 15 additional Relay Access Units Wireless (RAUWs) can be connected to the MAUW. A RAUW differs from a MAUW as it works only as range extender. Since they don't work as modules for the CU they are not connected via the CAN Bus, the MAUW connects to the RAUWs over a RS-485 cable connection.

They are connected as a chain and for clear internal identification the hardware switch on the back of each AUW is set on a different position. (The MAUW has to have this switch on position 0). The whole logic about which RAUW respond to which Agent and which is accepting requests is done inside the MAUW and does not affect the CU.

In addition to avoid unwanted cross communication between CU systems that are close to each other the MAUW binds each registered Agent to his Network ID. A bound Agent refuses to communicate with other CU/MAUW systems.

To increase reliability an AUW is equipped with a redundant power supply, to ensure power.

Powering the Wireless Access Unit

- Three Power Inputs
  - DC power adaptors
    - Connect independent power supplies to redundant barrel connector inputs
    - Use independent circuit breakers for DC power adaptors
  - CAN-In
  - RS-485
- Two Power Outputs
  - CAN-Out
  - RS-485
- Chaining via RS-485
  - Maximum number of Wireless Access Units?
  - Use a 24 V supply

Communication Ports

- RS-485
- CAN
- Show pin configuration

Modes of Operation

- Configured by ID dial
- Master
  - Upstream connection to Control Unit via CAN
  - Downstream connection to Relay Wireless Control Units via RS-485
  - Wireless Access Units
  - Set to ID 0

- Relay
  - Upstream connection to Master Wireless Access Unit via RS-485
  - Set to IDs 1 to F
  - Each ID may be assigned only once on the RS-485 bus