M-DOT-R PRO: Panel module with built-in RFID reader

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Technical data

Supply voltage
11 — 16V DC

Idle current consumption
15mA

Maximum current consumption
55mA

Technical data cont.

1-Wire
up to 6 sensors

Buzzer
yes

Communication interface
RFID

Dimensions

Width
90mm*

Height
90mm*

Depth
27mm

Environment

Temperature
-20 — 50°C

Humidity
≤95%RH, non-condensing

The image above is for illustration purpose only. The actual module may vary from the one presented here.
* The exact dimensions of the module depend on the variant of the glass edge finish selected when placing an order.

General features

Module M-DOT-R PRO is a component of the Ampio system. Required voltage to power the module is 11 — 16V DC. The module is controlled via CAN bus.

The M-DOT-R PRO module is available for sale by special order.

RFID card reader

The module is equipped with an RFID card reader. It allows reading cards in the ISO14443A, ISO14443B and ISO15693 standards at a frequency of 13.56 MHz and is used to implement access control functionalities.

The M-DOT-R PRO module can be optionally equipped with an RFID card holder pocket. This option must be agreed upon during the ordering and engraving design stages.

Internal verification

During configuration, it is possible to save a series of RFID card identifiers that will be recognised by the M-DOT-R PRO module. When a card that is recognised by the device is brought close to it, information about this event is sent to the CAN bus. This information can be used by other devices in the building automation system.

For each added card, it is also possible to assign a schedule specifying when it is to be recognised.

In order to use the functionality of schedules, the bus must have a module that provides time information, e.g. a module from the M-SERV or M-RT family.

Buzzer

The module is equipped with a buzzer that enables generating sound signals. By default, each press of the sensor field triggers a short buzzer sound. However, this behaviour can be modified.

In addition to confirming that the sensor field has been pressed, the buzzer can be used to signal any other events observable by the building automation system. The sound volume and type are defined at the device configuration stage.

Temperature sensors

The module is equipped with a 1-Wire interface connector that allows to connect up to 6 digital Dallas DS18B20 temperature sensors. The temperature measurement result is available for all devices operating within the building automation bus. It may turn out to be particularly useful for purposes related to temperature regulation, or to present the measurement result on touch panels and in a mobile application.

The total length of the 1-Wire bus cable to which the temperature sensors are connected cannot exceed 15m.

Example applications

- Implementation of access control mechanisms;
- Switching on lighting or any other devices connected to the building automation system.

Installation

The panel can be mounted on a surface or it can be flush with the wall surface. Depending on the expected effect, a flush mounting plate or surface mounting frame is used. The frames are available in two variants - for panels with glass with and without chamfered edges.

Both in the case of flush and surface mounting, a standard junction box must be located behind the panel, inside which there will be connectors for the CAN bus and the 1-Wire interface. In the case of flush mounting, the box must be embedded in the wall at a greater than standard depth.

A detailed description of the installation of panels in both variants is available in the appropriate installer guides published on the Ampio knowledge base website.

Device status LEDs

On the back of the device, there is one red LED indicating the communication status within the CAN bus:

- one regular flash every 1 sec. – CAN bus communication is working properly,
- two regular flashes every 1 sec. – the module is not receiving information from other smart modules,
- three regular flashes every 1 sec. – the module cannot send information to the CAN bus;

After the device is embedded in the mounting plate or frame, the LED is hidden.

Programming

The module is programmed with the use of the Ampio Designer software. It allows you to modify the parameters of the module and define its behaviour in response to signals directly available to the module as well as general information coming from all devices present in the home automation bus.

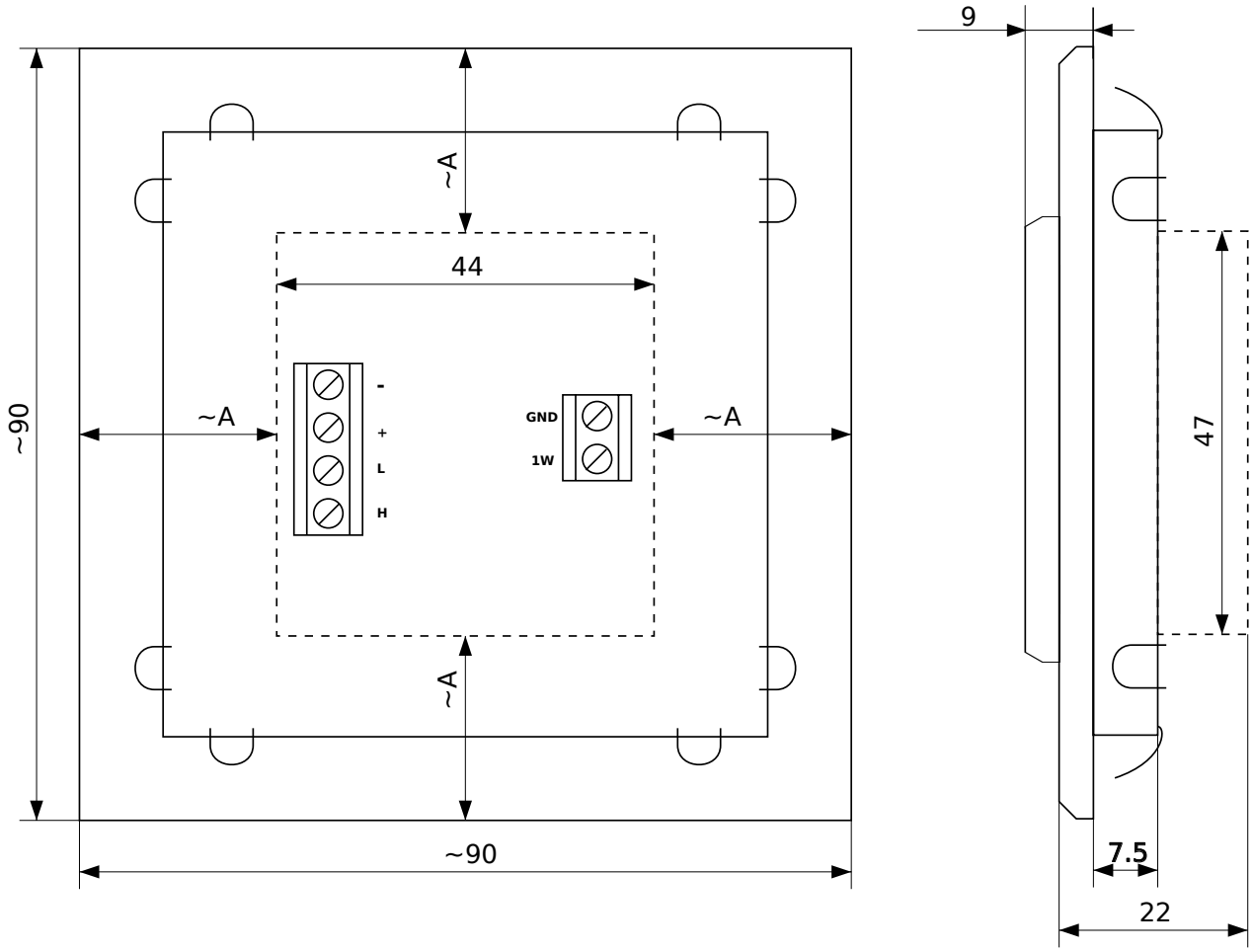
Module dimensions

Dimensions expressed in millimeters.

The panel consist of a glass front and a body with connectors and mechanical interfaces meant for mounting with the use of mounting plates or surface frames. The body is mounted in the center of the rear surface of the glass front with a margin of error appropriate for the production process.

The exact dimensions of the module front depend on the variant of the glass edge finish selected when placing an order.

In the dimensions diagram, the dashed line marks the area where the connectors of the device and its other elements protruding from the body are located. The outline of this area corresponds to the central opening in mounting plates and frames for panels. In the actual module, the CAN bus and 1-Wire interface connectors may be located in a different place than in the figure below, but within the marked area.



Connection diagram

The location of the device connectors on the connection diagram is indicative - in the physical module their location may be different.