M-IN-11p: Module with eleven bi-state inputs

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Technical data

Supply voltage
11 — 16V DC

Current consumption
25mA

Number of supply voltage detecting inputs
11

Number of LED outputs
11

1-Wire
up to 6 sensors

Dimensions

Width
41mm

Height
44mm

Depth
16.5mm

Environment

Temperature
-40 — 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.

General features

Module M-IN-11p 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 module has eleven voltage-detecting inputs, eleven LED outputs, and a 1-Wire interface.

Supply voltage detecting inputs

The module has inputs that go into an active state when they are shorted to voltage in the range of 2-24 V DC. They can be used with any devices with potential-free contact outputs, e.g. wall switches, reed switches, buttons, switches, etc. They can also be used for integration with devices with potential-free relay outputs or optocoupler outputs with an isolated emitter.

LED outputs

The module has low-current LED outputs. Each of the outputs provides a voltage of 5V through a built-in series resistor.

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.

Typical application

- Connecting classic light switches or other devices with potential-free contact outputs;

- integration with devices with potential-free relay outputs;
- integration with devices with optocoupler outputs;
- room temperature measurement;
- informing about the status of any device in the system using LEDs.

Installation

The dimensions of the module enable its installation in a standard junction box. In order to start the module, it must be connected to the CAN bus. The bus of the Ampio system consists of four wires - two for power and two for communication between the modules.

In addition to the CAN bus connector, the device has a 1-Wire interface connector with screw terminals.

On the front of the device there are two, double-row, 11-pin goldpin connectors with a raster of 2.54mm. The left connector allows for connecting up to 11 signalling LEDs, while the right one allows to connect eleven signal lines to voltage-detecting inputs.

Device status LEDs

On the front of the module there are signalling LED indicators. The redl LED with the label *CAN* indicates the status of communication on 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 modules,
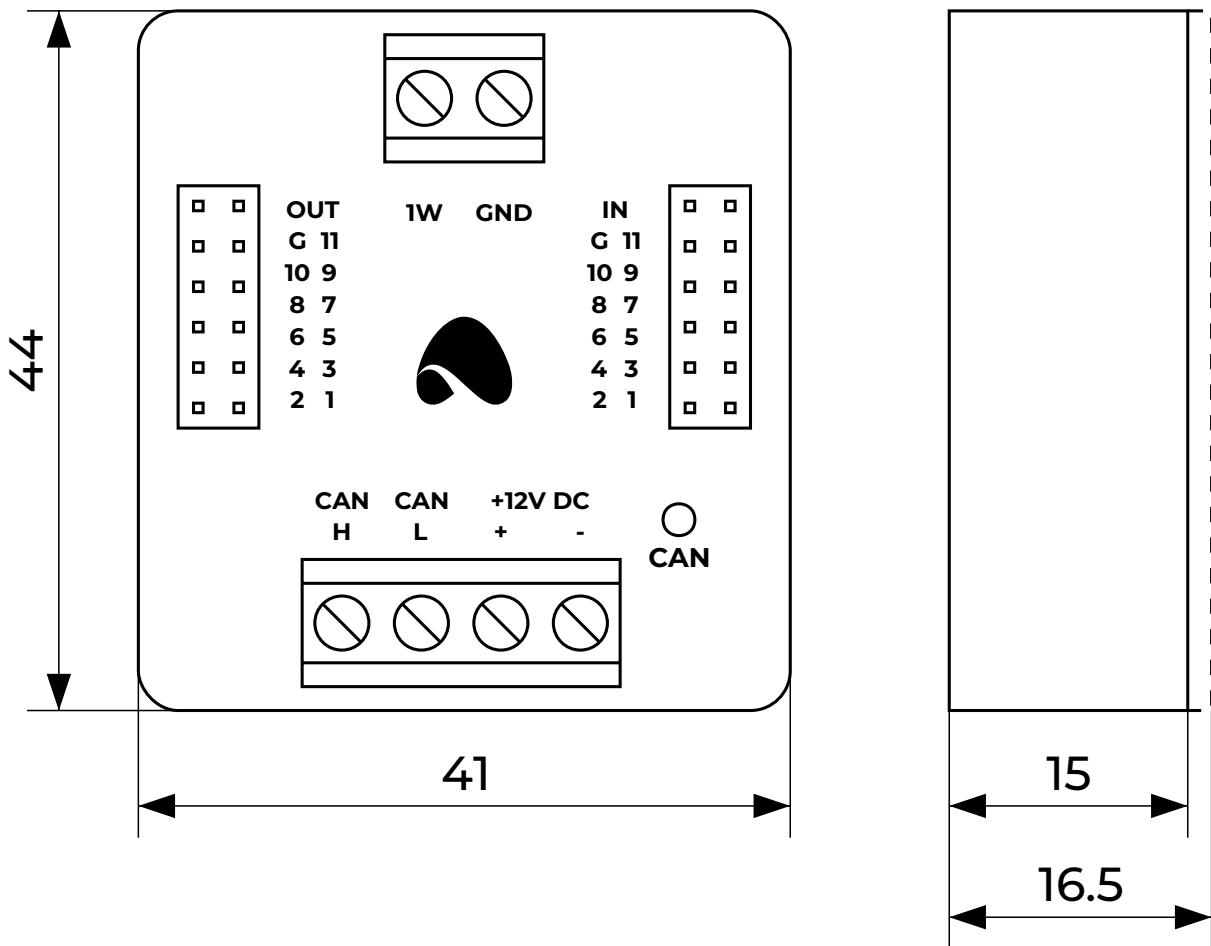- three regular flashes every 1 sec. – the module cannot send information to the CAN bus;

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 dashed lines mark the areas where the device connectors or its other elements can be located.

Connection diagram