The JA-112M BUS module for magnetic contact – 2 inputs

*The JA-112M is a BUS device of the **JABLOTRON** system. It has two wire inputs that can be connected unbalanced, single or double balanced or in a roller mode. It is primarily used to connect magnetic contact (e.g. SA-201, SA-203, SA-211). The module has a status reaction (reports its activation and deactivation) and takes two positions in the system. It should be installed by a trained technician with a valid certificate issued by an authorized distributor.*

Installation

When selecting the right location for the module, bear in mind that the wires leading to the detectors should not be longer than 100 m.

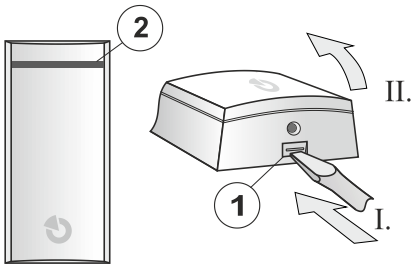


Figure 1: 1 – cover tab; 2 – LED indicator

1. Open the module cover by pressing the cover tab (1).
2. Take out the PCB from the plastic base by pressing the tab on the left part (3).
3. Push the cables through the plastic base and attach it to the selected place with screws. For a more comfortable installation there are cut-out holes (4) in the plastic and also a cable lead with fixing clips under the module board (5).

When connecting the module to the BUS, always switch the system power off.

4. Insert the PCB back and connect the cables to the terminals (9, 10).

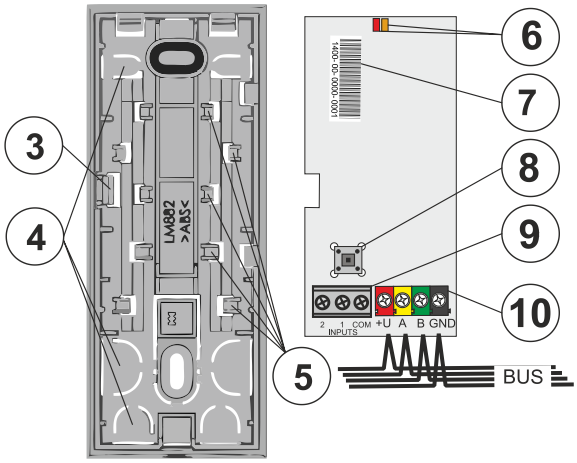


Figure 2: 3 – PCB tab; 4 – cut-out holes; 5 – fixing clips for cables coming from the top cut-out holes; 6 – red and yellow LED indicator; 7 – production code; 8 – tamper sensor; 9 – magnetic contact terminal; 10 – BUS terminal;

5. If you want to use a balanced loop for better protection of a magnetic contact connection use a 1 kΩ resistor in series with the detector (see the following figure). The balance function must be enabled in the module settings.

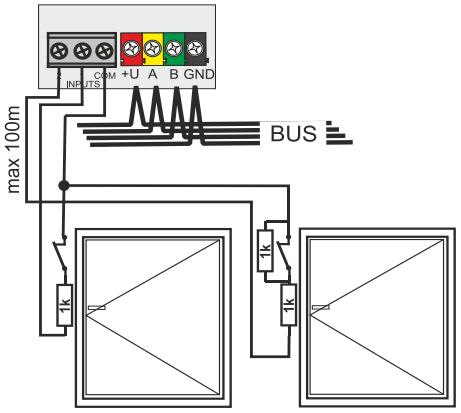


Figure 3: Loop balancing

6. Proceed by following the control panel installation manual. Basic instructions:
   a. When the module is switched on, the yellow LED lights up. With flashing it indicates that the module has not been enroled into the system.
   b. Open the ***F-Link*** software, select an unused position in the ***Devices*** tab and click on the *Enrol* button to enter the *Enrolment* mode.
   c. Click on the option ***Scan/add new BUS devices***, select the JA-112M module and double-click to confirm selection. The yellow LED goes off.
7. Close the module cover and test the module's function.

Notes:

- *The module can also be enroled into the system by entering its production code in the F-Link software. You can find the production code on the sticker (7) placed on the module board. All numbers under the bar code must be entered (1400-00-0000-0001).*
- *The module can also be enroled into the system by pressing the tamper sensor (8).*
- *The number of modules is limited only by the current consumption from the control panel and by the number of positions in the control panel.*
- *It can take up to 1 minute to load the initial input states after the system boot.*
- ***Warning!** The module occupies two consecutive positions (each input has its own position). Should the second position be occupied, it will be automatically overwritten.*
- *If only the first input is used, the second input can be deleted by selecting it in the F-Link software and pressing "Delete" to release the position for another device.*
- *By deleting the first input, the module will always be deleted completely.*
- *To meet the EN 50131-3 standard it is necessary to secure the cover tab (1) with a supplied screw.*

Setting the module properties

Open the ***F-Link*** software, go to the ***Devices*** Tab. Click on the ***Internal settings*** button at any of the module's positions to open a dialogue window with internal settings for the input (according to the clicked position) where you can set the following options, (* indicates default settings):

To set the module to comply with Grade 2 classification, use the System profiles function in the Parameters tab in the F-Link software.

Inputs 1 and 2: tabs with complete input settings. Each input can be set differently.

Input function: *Enabled**

Disabled – no reaction (the input is disabled).

Enabled – reacts to a change of connected detector (standby NC), see the figure in F-Link software.

Single balanced – there has to be an **R_{ACT}** resistor put in series with an **ACT** activation contact (see the figure in the F-Link software). To set its value use the *Balancing resistor* parameter that is visible when you select this function. The input is activated when the resistance of the loop changes by 30 %.

Double balanced – there has to be an **R_{TMP}** resistor put in series with a **TMP** tamper contact and the activation contact has to be bridged by an **R_{ACT}** resistor (see the figure in the F-Link software). To set its value, use the *Balancing resistor* parameter. The values of the **R_{TMP}** and **R_{ACT}** balancing resistors can be different, see the *Balancing resistor* parameter.

The loop can have up to 3 states: **Standby** – the value of measured loop resistance equals R_{TMP}; **Activation** – the value of measured loop resistance equals R_{TMP} + R_{ACT} (if multiplicity is used – R_{TMP} + n * R_{ACT}); **Tamper** – the value of measured loop resistance is different than previous values. To ensure reliable detection the device assumes a variability of values (± 30%).

Roller – reacts to short repeated disconnection pulses with an adjustable sensitivity to two levels: **Impulse1** – activation after 3 pulses within 2 minutes; **Impulse2** – activation after 5 pulses within 2 minutes. After activation the module is in idle status for 10 s.

LED indication: *Enabled** The red LED indicates a change of state of any input with a short flash.

Impulse behaviour: *Disabled** can be used for all functions except the roller. The default option is disabled, the input works in a status mode. It means the input reacts to disconnection/connection (activation and deactivation) of the loop. If enabled the input will only react to activation and after 2 s it will go to standby automatically.

JABLOTRON ALARMS a.s.
Pod Skalkou 4567/33 | 46601 | Jablonec n. Nisou
Czech Republic | www.jablotron.com

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Inverted input reaction: (valid for an Enabled or Balanced input only) the default setting for the input reaction is NC (normally closed). Enabling this option sets the reaction to NO (normally open).

Balancing resistor: can be used for a Single balanced input and for a Double balanced input. The default value is 1k0.

For a *Single balanced* input select the **R_{ACT}** value of balancing resistor from the pre-set values.

For a *Double balanced* input select the **R_{TMP}** and **R_{ACT}** value of resistor for the detection of tampering and activation from the pre-set values (the selected value applies to both resistors)

Delayed input reaction: time filter to increase the immunity to false activation 0.5 s* (setting 0.1 s … 300 s). It determines for how long the input has to be triggered for the control panel to record (react to) the activation. For a Double balanced input the setting can be 0.5 s … 300 s).

Copy of input settings: this button allows you to copy the settings of the other input to a currently programmed input.

Test input measuring: this tab shows the currently measured resistance at a specific input (loop). The graphical representation fully respects the input settings (function, balancing and its value). It visualizes the current status of the measured value. Due to the recording of measured values over time it shows a visible curve with all changes and you can test all detectors this way.

Technical specification

Power	From control panel BUS 12 V (9 … 15 V)
Current consumption in standby mode	7 mA
Current consumption for cable choice (maximum)	12 mA
Maximum length of cable to the magnetic contact	100 m
Dimensions	110 x 44 x 26 mm
Weight	51 g
Classification	Grade 2/II. indoor general (According to EN 50131-1)
Operational environment	Indoor general
Operational temperature range	-10 °C to +40 °C
Average operational humidity	75 % RH, non-condensing
Certification body	Trezor Test s.r.o. (no. 3025), Telefication B. V.
Also complies with	EN 50131-1, EN 50131-3, EN 50130-4, EN 55032, EN 50581, T 031
Recommended screw	2 x  ø 3.5 x 40 mm (countersunk head)

JABLOTRON ALARMS a.s. hereby declares that the JA-112M is in compliance with the relevant European Union harmonisation legislation: Directives No: 2014/35/EU, 2014/30/EU, 2011/65/EU, when used as intended. The original of the conformity assessment can be found at www.jablotron.com – the Downloads section.

Note: Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Please return the product to the dealer or contact your local authority for further details of your nearest designated collection point.