

The JA-120N BUS module for electric door locks

The product is a component of the **JABLOTRON 100** system. It serves for powering and controlling electric door locks and access control units from the system BUS. During lock operation the included batteries supply enough current to open an electric lock, during the leading edge of the current pulse. The JA-120N can be mounted practically in any place where it is difficult to install an external power supply to control an electric lock.

This module reacts to control panel PG outputs or it can be activated by a release key connected to the IN terminal. The module is supplied inside a JA-190PL installation box.

It should be installed by a trained technician with a valid certificate issued by an authorised distributor.

Installation

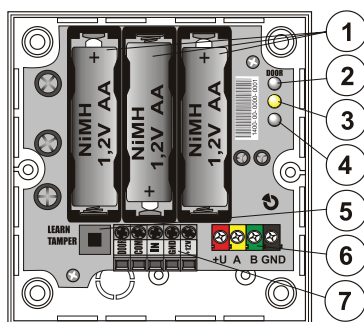


Figure 1: 1 – rechargeable batteries; 2 – DOOR output indicator; 3 – JA-100 BUS activity indicator; 4 – IN input activation indicator; 5 – LEARN (enrollment)/ tamper contact; 6 – BUS terminals; 7 – input and output terminals (I/O)

- We recommend removing the module's PCB to avoid unwanted damage during installation. Punch the holes into the JA-190PL rear plastic part for cables. Insert the BUS cables and attach the plastic base onto the required place using screws.



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

- Put the PCB back onto the plastic base. Connect the BUS wires to the BUS terminals (6) and the cables for door lock control to the I/O terminals (7). Always use CC-01 (Jablotron) cable for connecting to the control panel. For connection of the door lock or the external power supply use cables with an adequate cross-section.

Terminal descriptions:

DOOR +12V output for electric lock control
COM, IN Input terminals serving for activation by the release button (reaction NO/NC).
GND Common terminal for an external power supply and for electric door lock control
+12V Input terminal for an external power supply (the DE 06-12 is recommended)

- Proceed according to the control panel installation manual. Basic procedure:
 - When the system has been turned on then the yellow LED (3) flashes and it indicates the module has not been enrolled to the system yet.
 - Using **F-Link** software, select the required position in the **Devices** window and launch enrollment mode by clicking on the **Enroll** option.
 - Press the LEARN/TAMPER (5) button in the module – the module is thus enrolled to the system and the yellow LED indicator goes off.
- Put the cover on the module.

Setting the module properties

The module properties can be set in the **Devices** window of the **F-Link** software. When at the module position, use the **Internal settings** option to open a dialogue window where you can set the following options:

LED indication – Enable/disable optical indication by the red LED (4) of triggering the IN input.

DOOR reacts to PG status – Determines which PG output or outputs the module reacts to.

Minimum PG switching time – Sets the minimum switching time of the DOOR output regardless of the PG output impulse length.

Maximum PG switching time – Sets the maximum switching time of the DOOR output regardless of the PG output impulse length. When the IN input is triggered the DOOR output is always switched on for that predefined time.

Note: the minimum switching time can't be set to a higher value than the maximum value. The **F-link** software adjusts its offer of those parameters dynamically.

IN input options:

Disabled The module doesn't react to IN input activation

Manual control Triggering the IN input switches on the DOOR terminal for a predefined time according to the "Maximum PG switching time"

System Triggering the IN input causes the control panel to react according to the reaction set at the module's position in **F-link** (Reaction column)

IN input inverted: Determines the logic of the IN input NC/NO. The input is not balanced and is set to NO as a factory default (option disabled).

DOOR input inverted: This option inverts the logic of the DOOR output for e.g. reverse locks. When the option is checked and the input is in standby a voltage occurs on the DOOR output.

Note: for correct functioning it is necessary to power the module from an external power supply (for instance: the DE 06-12).

Blocking the IN input by section: This option can block the IN input by setting the section to which the module has been enrolled. The option is only available if Manual control of the IN input has been enabled.

Function button during communication fault: This option keeps the module active, with backup control of the DOOR output by IN input triggering when communication with the control panel is lost.

Unlock the IN input during a fire alarm: This parameter unlocks the IN input during a fire alarm even though blocking the IN input by the section has been enabled. This option is available only if the function "Blocking the IN input by section" is enabled.

Triggered tamper: This parameter can disable the tamper contact for cases when the module is going to be installed inside a different box or into a box with different tamper protection.

Note: The module is designed for use with very high quality NiMH batteries (purchase code-BAT-1V2-NIMH) in a positive operational temperature range. NiMH batteries have unsuitable behaviour in a **negative operational temperature range** so in this case we recommend using NiCd batteries in the module.

Application recommendation:

We recommend using the module with door locks complying with the following parameters:

- Standard locks 12 V DC / max. 300 mA
- Reverse locks 12 V DC / 170 mA (for reverse door locks it is **necessary** to plug in an external power supply, for example the DE 06-12)

Accumulators lifetime (approximate values)

| Electromagnetic lock current consumption (mA) | Duration of an impulse (s) | Period of time necessary to recharge accumulators after one activation (s) | Number of impulses from fully charged accumulators (1900mAh) |
|---|----------------------------|--|--|
| 230 | 10 | 387 | 618 |
| 230 | 10 | 193 | 1241 |
| 230 | 10 | 55 | 3114 |

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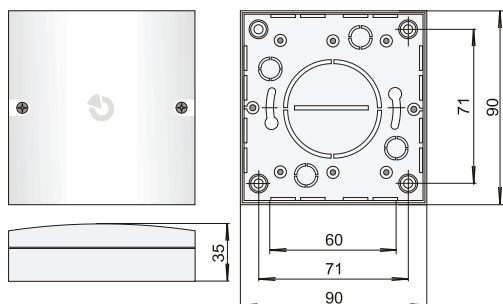


Figure 2: JA-190PL installation box dimensions

Technical specifications

| | |
|---|---|
| Power | from the control panel BUS (9...14 V) |
| | 3x NiMh rechargeable accumulator type AA Eneloop 1900 mAh |
| | <i>Please note: Batteries are not included</i> |
| External power | +12 V |
| Current consumption in standby mode | 10 mA |
| Current consumption for cable choice | 60 mA |
| DOOR output load (Eneloop batteries): | |
| Pulse (1s) | 600 mA |
| Continuous | 300 mA |
| Dimensions | 90 x 90 x 35 mm |
| Weight | 185 g |
| Operational temperature range | -10 °C - +40 °C |
| Classification | Grade 2 |
| According to | EN 50131-1, EN 50131-3, |
| Operational environment according to EN 50131-1 | II. General indoor |
| Also complies with | EN 50130-4, EN 55022 |



JABLOTRON ALARMS a.s. hereby declares that the JA-120N is in a compliance with the relevant Union harmonisation legislation: Directives No: 2014/30/EU, 2011/65/EU. The original of the conformity assessment can be found at www.jablotron.com - Section Downloads.



Note: Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the producer after use.