JA-113M, JA-113M-GR, JA-113M-AN Bus magnetic detector with recognition of external magnetic fields

*The product is a component of the **JABLOTRON** system. It is used for the detection of opening doors, windows, etc. The device has a selectable reaction (pulse or state). It should be installed by a trained technician with a valid certificate issued by an authorized distributor. This product is compatible with JA-100K, JA-101K, JA-103K, JA-106K, JA-107K, JA-108K control panels.*

Installation

Choose a suitable place for the detector's installation. Mount the sensor part on the fixed part of the door (window) and the magnet on the moving part.

If mounted directly on metal objects (i.e. metal door frames), the operation of the magnetic sensor may be affected.

Two types of magnets are supplied with the detector. A ferrite magnet in a plastic housing (A) and a ring magnet (B). The correct location of both types of magnets is shown in the illustration. The distances for activation/ deactivation of the detector with the ferrite magnet (for non-magnetic mounting surface) are shown in the table. For other magnet types or opposite polarity, these values may vary.

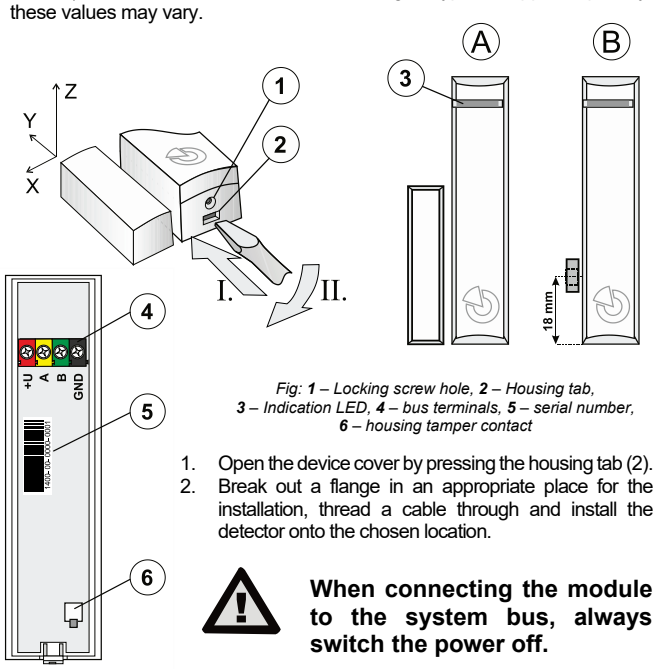


*Fig: **1** – Locking screw hole, **2** – Housing tab, **3** – Indication LED, **4** – bus terminals, **5** – serial number, **6** – housing tamper contact*

1. Open the device cover by pressing the housing tab (2).
2. Break out a flange in an appropriate place for the installation, thread a cable through and install the detector onto the chosen location.

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

3. Screw the selected magnet onto a moving part, e.g. a door leaf. The bottom edge of the ferrite magnet plastic must coincide with the bottom edge of the detector housing. It is recommended to use a special non-magnetic screw (included in the package) to attach the ring magnet.
4. Connect the BUS cable to the device's terminals (4).
5. Proceed according to the control panel installation manual:

   Basic procedure:

   a. When the system is switched on, the yellow LED on the module lights up. Flashing indicates that the module is not assigned to the system.

   b. Go to the ***F-Link*** software, select the required position in the ***Devices*** tab and launch the enrollment mode by clicking on the ***Enroll*** button.

   c. Press the ***Scan/add new bus devices*** button, select the JA-113M detector and confirm by double clicking on it. The detector will be enrolled and the yellow LED indicator (3) will go off.
6. Close the detector cover and test its functionality.

Note:

- *Enrolment can also be done by entering the serial number in F-Link. All digits are entered (serial number pattern: 1400-00-0000-0001). The serial number is indicated on the sticker (5) located on the module board.*
- *Enrolment can also be done by activating the tamper contact of the cover (6).*
- *The number of modules is limited only by the power consumption of the control panel and the number of positions in the control. panel.*

7. In order to comply with norms, the front cover must be secured with the supplied locking screw (1).
8. Configure the detector by following the *Internal settings* chapter in this manual.

Internal settings of the detector

The settings are configured by the F-Link software – Devices tab. Use the **Internal settings** option on the detector position. A dialog will appear in which the detector functions can be set:

LED indication: On/Off

Pulse mode: Only activations are transmitted to the system

Foreign magnetic field detection*:* When switched on, the detector will analyze its surrounding magnetic field and in case of its disturbance (e.g. by a foreign magnet) the detector will trigger an Input Activation and a Fault. The function brings higher protection of the object.

Note: For the correct function of the foreign magnetic field detection, it is necessary to calibrate the detector to the working value of the magnetic field.

Important: When the foreign magnet detection function is switched on, the window or door can only be opened in the direction in which the magnet movement has been calibrated. Otherwise, the detector will trigger a Fault simultaneously with the Activation. Therefore, this function cannot be used for windows or doors that are opened in multiple ways (opening, tilting).

Calibration: button to start the calibration process.

To start the calibration from the periphery, the system must be in Service mode, then Activate tamper contact (open the plastic cover) and within 5 seconds deactivate the tamper contact (close the plastic cover).

This procedure will enable calibration directly from the device – indication as described below from point 3 (inclusive). The yellow LED will not be lit when calibration is started from the detector (it is only lit if the peripheral has an open internal setting in the F-Link). Calibration can be terminated by activating the tamper contact (open the plastic cover).

Calibration procedure in F-Link + optical indication:

1. LED Off = the device waiting for connection. To continue, **activate and deactivate the magnet** (open and close the window/door).
2. Yellow LED on = detector has established a connection. **Start calibration** to continue.
3. **Activate the detector** in order to confirm presence of the magnet. The LED indicates in yellow with the red LED regularly flashing twice.
4. **Please return the magnetic detector into its un-activated state**. Yellow LED on + rapid flashing of red LED = magnetic detector calibration takes place for approx. 4 s.
5. Yellow LED on + slow flashing red LED = detector is ready to continue calibration. To continue, **activate the detector by opening and closing the window/door**. Confirmation of the detector calibration will be indicated by the red LED lighting up for approx. 1 s. Then the red LED will go out and the setting status will change to **complete**, the yellow LED remains lit.

Tables of distance values for activation and deactivation of the detector when using the supplied ferrite magnet (values may vary when used with other permanent magnets).

Axis	*X*	*Y*	*Z*
Activation distance (mm)	*10*	*17*	*22*
Deactivation distance (mm)	*6*	*10*	*18*

Table 1: Distances for activation/deactivation of a detector installed on nonmagnetic surface.

Axis	*X*	*Y*	*Z*
Activation distance (mm)	*10*	*17*	*22*
Deactivation distance (mm)	*6*	*10*	*18*

Table 2: Distances for activation/deactivation of a detector installed on magnetic surface.

Technical parameters

Power	*from control panel digital bus 12 V DC (9–15 V)*
Low power supply voltage fault	*<8.8 V*
Quiescent current consumption	*2.5 mA*
Maximal current consumption	*12.5 mA*
Dimensions transmitter part	*20 x 86 x 20 mm*
Dimensions magnet part	*16 x 55 x 15 mm*
Weight	*18 g*
Classification	*security grade 3 / environmental class II (EN 50131-1)*
Operational environment	*Indoor general*
Operating temperature range	*-10 °C to +40 °C*
Averate operational humidity	*75 % RH, non-condensation*
Certification body	*Trezor Test s.r.o. (no. 3025), Kiwa Nederland b. v.*
In compliance with	*T 031, EN 50131-1, -2-6, EN 50130-4, EN 55032, EN IEC 63000*
Recommended screw	*2x ø 3.5 x 40 mm (flat head)*

JABLOTRON a.s. hereby declares that the JA-113M, JA-113M-GR, JA-113M-AN is in compliance with the relevant European Union harmonisation legislation: Directives No: 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.*

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