JA-110T Bus short circuit isolator module

The JA-110T is a component of the JABLOTRON JA-100 system. It is used to increase the safety of bus cables in a house. It separates the outer bus branch from the inner branch. If the outer branch is damaged (e.g. a burglar short-circuits the cable), the inner branch of the system remains fully functioning.

It is recommended to use the isolator namely in cases when the bus cable leads outside the guarded area. The isolator can also be used to separate individual floors (or wings) in a house.

The isolator can also be used to extend cable length – it improves signal transmission when long cables are used. The module should be installed by a trained technician with a valid certificate issued by an authorized distributor.

Installation

The module can be installed into a JA-190PL mounting box (supplied by Jablotron), into a control panel housing or into a standard mounting box. **It should always be installed inside the guarded area**.

It is possible to install an **unlimited number of isolators** into the system. However, they should only be used to split the cables of the inner bus branch. **It is forbidden to connect multiple isolators in a row**.

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

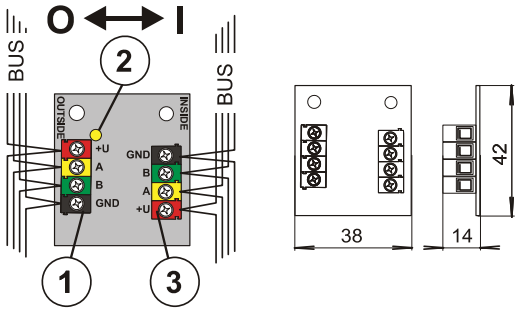

Figure: 1 – outer bus branch terminals (O); 2 – indication of fault in the outer bus branch; 3 – inner bus branch terminals (I from the control panel)

The isolator becomes functional when the cables are connected and the system is switched on. It does not have to be enrolled into the system (it does not occupy an address).

Function

The isolator disconnects the output (O) bus for 5 seconds if:

1. the electrical current drawn from the isolator increases above 250mA (+U and GND terminals in the OUTSIDE part)
2. the bus input voltage drops below 9V (+U and GND terminals in the INSIDE part)

If there is a permanently over-high current drawn from the output (O) or a low voltage, on the intput, the outer bus remains permanently disconnected, or the voltage could cycle in 5 s intervals. Disconnection of the output terminal is indicated with a permanently lit yellow LED (2).

If it is necessary to connect a remote bus-powered detector and utilize the module's function for improving signal quality, sufficient voltage on the bus input must be ensured (by using a sufficiently thick cable) in order to prevent disconnection of the output (O) part of the bus if the input voltage drops below 9V.

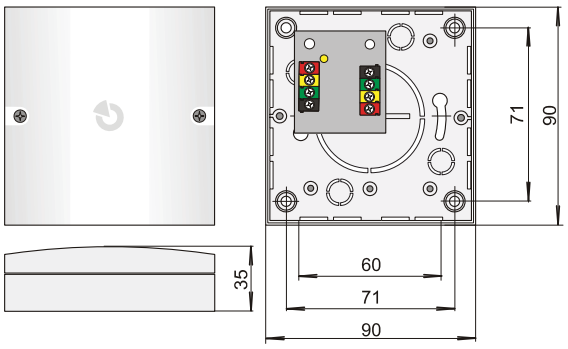

Figure: Example of installation into a JA-190PL mounting box

Technical specifications

Power	from control panel digital bus 12 V (9…15 V)
Current consumption in standby mode	5 mA
Current consumption for cable selection	5 mA
Maximum allowed current in the outer bus branch	max 250 mA
Classification	Grade II
according to	EN 50131-1, EN 50131-3,
Operational environment according to EN	50131-1 II.Indoor general
Operating temperature range	-10°C to 40°C
Also complies with	EN 50130-4, EN 55022

JABLOTRON ALARMS a.s. hereby declares that the JA-110T Bus short circuit isolator module is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The original of the conformity assessment can be found at ***www.jablotron.com*** - Technical Support section

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. For more detailed information visit ***www.jablotron.com***.

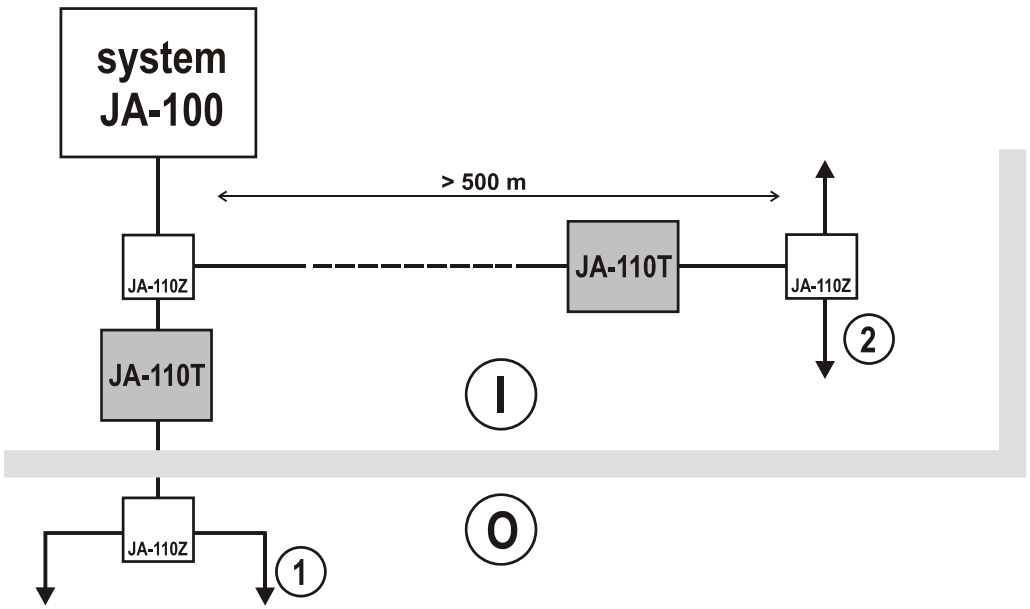

Fig: (I) inner (guarded) area; (O) outer (unguarded) area; (1) separation of the outer bus branch; (2) bus length extension over 500 m (see Function)

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