JA-110T Bus short circuit isolator module

*The JA-110T is a component of the **JABLOTRON** 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**. In order to be compliant with Security Grade 2 classification, the module must be installed into a JA-194PL or a JA-195PL mounting box together with a JA-111H TRB module.

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.

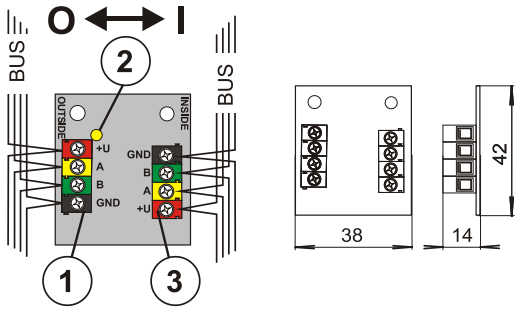


Figure: 1 – outer bus branch terminals (O); 2 – indication of fault in the outer bus branch; 3 – inner bus branch terminals (I from the control panel)

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 9 V.

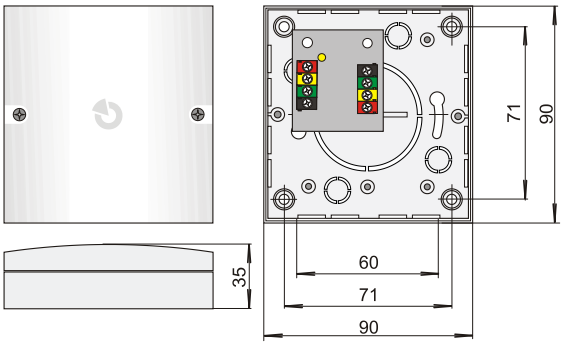


Figure: Example of installation into a JA-190PL mounting box

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	360 mA
Maximum allowed current in the outer bus branch	250 mA
Classification	Security grade 2/Environmental class II according to EN 50131-1
(Only when installed into a JA-194PL/JA-195PL mounting box together with a JA-111H TRB module)	
Dimensions	38 x 42 x 14 mm
Weight	15 g
Operational temperature range	- 10 °C to + 40 °C
Average operational humidity	75% RH, non-condensing
Certification body	Trezor Test s.r.o. (no. 3025) KIWA
Complies with	EN 50131-1, EN 50131-3, T 031 EN 50130-4, EN 55032, EN 50581

JABLOTRON ALARMS a.s. hereby declares that the JA-110T 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: 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.

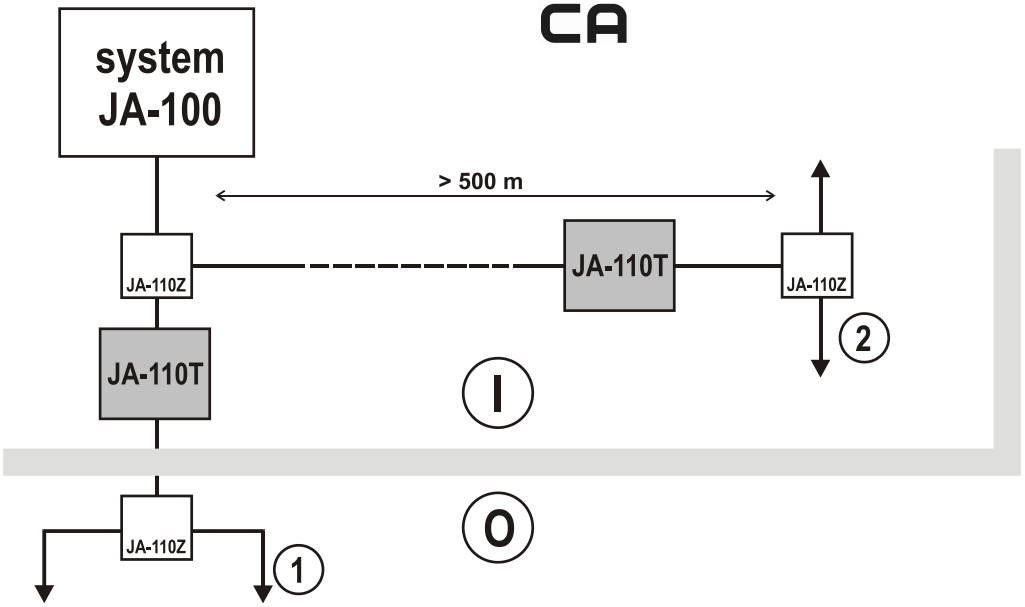


Fig: (I) inner (guarded) area; (O) outer (unguarded) area; (1) separation of the outer bus branch; (2) bus length extension over 500 m (see Function)

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