JABLOTRON

JABLOTRON JA-100 introduction

0212_c1

Introduction

Today's goals

- Introduction of the brand new JA-100 alarm system
  - Visions
  - Basic architecture
  - System components
  - Setting
- Help us with final validations
  - We are keen to get your reports

Sales launch – Summer 2012 and market localisation will be ready.

Introduction

Why a new alarm system?

- Perfect tool for installers
  - Security, access systems, home automation
  - High-tech level product, like never before
- For the user: "a lot more than he expects"
  - Friendly and smart control
  - New design of products – branded
- Ahead of our competition
- Investment in the future

Introduction

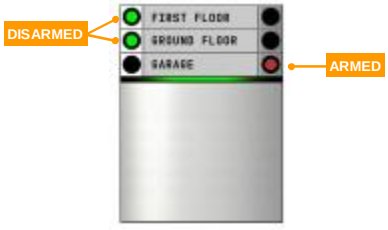
Patented human interface - PRO HUMAN CONTROL

- Tailor-made keypad

Introduction

Patented human interface - keypad

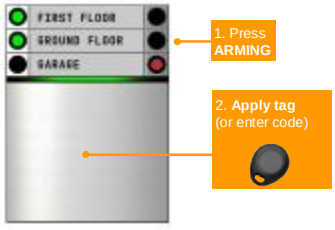
- The EASIEST to understand



Introduction

Patented human interface - keypad

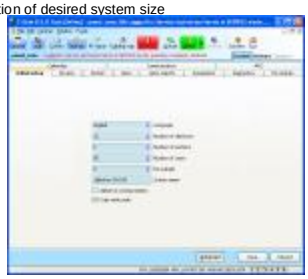
- Intuitive control



Introduction

Flexible inside

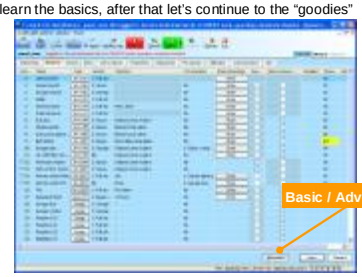
- Your selection of desired system size



Introduction

Selectable levels of functions

- First learn the basics, after that let's continue to the "goodies"



JA-100 structure

It will all fit perfectly, as you wish

- From 1 to 120 system devices/detectors
- From 1 to 15 independent sections
- From 1 to 300 users
- From 0 to 32 programmable PG outputs

JA-100 structure

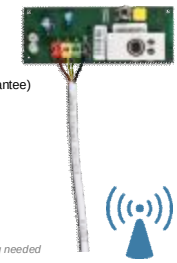
And much much more …

- From 0 to 20 automated calendar events
- From 0 to 4 ARC settings (CID, SMS or IP protocols)
- From 0 to 30 users who can receive reports
- Selectable number of independent masters
- Selectable number of independent installers

JA-100 structure

Hybrid system = Digital BUS and wireless devices

- Digital BUS
  - 4 wires
  - Communication and power
  - Non-JA detectors connected by a module (w/o guarantee)
- Wireless devices
  - 868 MHz radio frequency
  - Up to 3 radio modules
  - Coverage of many hundreds of meters

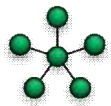


Digital BUS = we use a unique protocol to communicate, no balancing needed

JA-100 structure

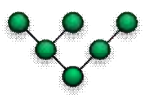
Digital BUS principles

- A mini-internet for data between control panel and devices
- Signals are like a wireless alarm system, but using wires instead of radio thru the air
- 4 wires
  - 2 for power supply
  - 2 for two-way data channel communication
- Simply connect detectors to the bus wires
  - no resistor balancing
- Much simpler than conventional wired connections



Star network

(Oasis, Profi)



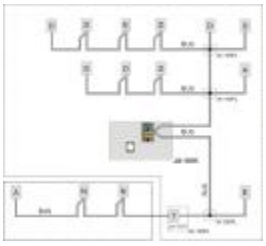
Tree network (JA-100)

Architecture

Installing the BUS system

- **Total cable length max. 500 m**
  - Larger control panel 2 x 500 m
- Tree structure
- **NO closed loop (GND)**
- Outside the guarded area must be isolated
  - JA-110T – Digital BUS isolator

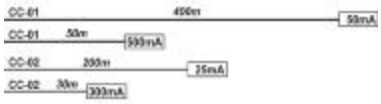
D – detector
E – keypad
T – isolator
A – siren
N – PG output



Architecture

Installing the BUS system

- Watch out for the voltage drop at the end of the line
  - Device current consumptions in one branch sum up
  - CC-01 and CC-02 Jablotron cables = functionality guaranteed
  - System diagnostics provided by Flink



CC-01, CC-02 colour-coded for the connectors plus indicated length

Architecture

Installing the BUS system

- The offer must be complete
  - Wire
  - Isolator and terminal modules
- Jablotron wires and terminals have colour coordination through the whole system
- Each device has a calculated power consumption

Standard cables (SYKFY etc.) can be used as well

Architecture - radio

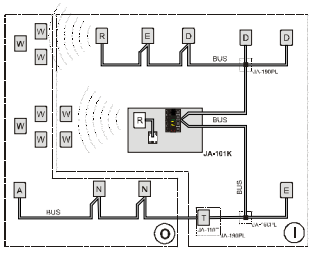
Wireless devices

- Coded radio protocol 868 MHz (different from JA-8x series systems)
- Range: hundreds of meters (open area)
- The system must have a radio module
  - Up to 3 radio modules
  - Optimum coverage of protected premises
- Alkaline battery power supply
  - 2 year lifetime, monitored
- One-way communicating devices
- Bi-directional communicating devices

Architecture - radio

Up to 3 radio modules in the system

D–detector
E–keypad
T–isolator
A – siren
N – PG output
R–radio module
W – wireless device
I – inside of protected area
O – outside of guarded area



Architecture - devices

Devices

- **ADDRESSABLE devices**
- Detectors, keypads, sirens, key fobs …
- Unassigned = yellow blinking
- Enrolling or entering the production number

- **Without ADDRESSES in the system**
- Output relays, isolators
- Function selection by switch

Architecture - sections

System splitting

- Up to 15 sections
- Access limitation
  - Weekly calendar (2 intervals/day)
  - User with/without limit
- Partial setting (arming)
  - Optional for selected detectors
- Common section
- Option to report the unset status

Acoustic warnings and reports according to section.

Architecture - sections

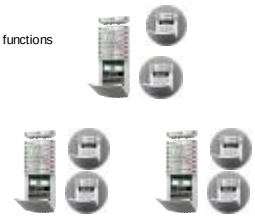
System splitting – LARGE installations

- Large keypad controls ALL
  - "HQ"
  - Segments for all sections and functions
  - Small keypads for smaller sections
- Can be used in
  - Company – departments – offices
  - House – home office – garage

Architecture - sections

System splitting – many independent systems

- Many independent systems (sections)
  - Up to 15 independent systems with their own control
  - Many independent common sections
  - Each keypad has its own sections and functions
- Can be used in
  - Apartment buildings
  - Offices in office buildings
  - Shops in a shopping mall
  - ...



Architecture - timing

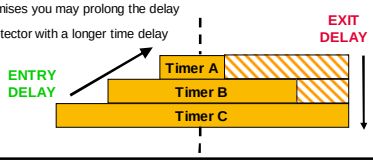
New timing possibilities - calendars

- Up to 20 independent calendars
- Calendar of automatic events
  - Weekly mode – selectable days and times
  - Switches on/off guarding – selectable sections
  - Switches PG outputs on/off – selectable PG

Architecture - timing

New timing possibilities – exit / entry delays

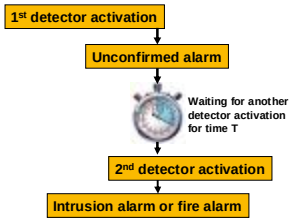
- 3 timers for entrance/exit delays A, B, & C
  - They are used individually in each section
  - Garage door function for timer C (with a time extension limit)
- When entering the premises you may shorten the delay
  - By triggering a detector with a shorter time delay
- When leaving the premises you may prolong the delay
  - By triggering a detector with a longer time delay



Architecture - timing

Timing = new reaction types in the JA-100

- **Confirmation by another detector**
  - Intrusion alarm
  - Fire alarm
- The system reaction
  - Instant confirmed
  - Delayed A confirmed
- Adjustable timing T
  - For intrusion T (0min – 60min)
  - For fire T (0min – 60min)

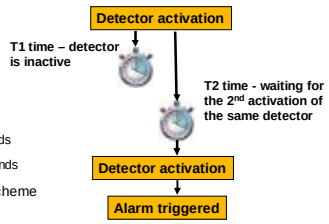


Can be confirmed by the same detector section or from any other section.

Architecture - timing

Timing = new reaction types in the JA-100

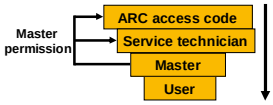
- **Confirmation of alarm by the same detector**
  - Intrusion alarms only
- System reaction
  - Repeated instant
  - Repeated delayed A
- Adjustable timing
  - T1 – maximum 60 seconds
  - T2 – maximum 120 seconds
- T1 < T2 visible from the scheme



Architecture - access

Access permissions

- User access = User codes
- Master access = Master codes
- Service access = Service code
- ARC access = ARC code
- Panic, set, PG only
- System with many Master and Service codes
- 2 main system modes
  - Service – not protecting, can be modified
  - Normal mode – ready to ARM



*Main service technician – position 0 (0*1010); main master - position 1 (1*1234).*

Architecture - users

User authorization

- To operate the JA-100 system authorization is need
  - RFID chip/card – up to 2 per user
  - Codes **From** ***0*nnnn*** **to** ***300*nnnn***
    - 0 to 300 are user positions
    - nnnn is a 4 digit code
    - A user can change the code himself
  - Phone number
- User authorization for
  - SET / UNSET
  - PG operation
  - Call out actions

A chip/card can only be assigned by entering a serial number in F-Link or by a JA-190T reader.

Architecture - communication

GSM communicator

- GSM communicator on the board
  - It is already part of the control panel main board
  - Voice, SMS, data
- Reporting
  - ARC – IP protocol, SMS and voice CID
  - SMS to users
  - Voice messages
- Controlling and programming
  - By Internet
  - By SMS and voice

If more communicators are in the system, main and back-up can be set up.

Architecture - communication

Other ways of communication with the outside world

- LAN communicator
  - It is part of the control panel (JA-106K version only)
  - Can be a backup for GSM or a main channel
- Phone communicator
  - Additional module for use within control panels JA-101K and JA-106K
  - Back-up channel for GSM or LAN Ethernet

If there are several communicators in the system, main and backup levels can be set up.

Architecture - communication

User reports

- SMS reports are sent to up to 30 users
  - Alarm photos
  - Set / Unset
  - PG On / Off
  - Faults
- Voice messages sent to max. 15 users (5 at the same time)
- 4 special reports adjustable for detector activation A,B,C,D
- Selection of reported sections

Set/unset actions are not notified to the user who performs the action.

Architecture - communication

Logging into MY JABLOTRON

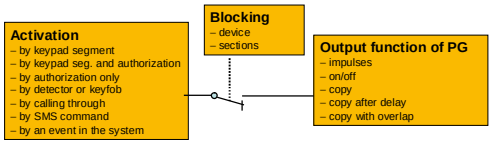
Architecture - communication

MY JABLOTRON example I You can see your alarm system's status and much more

Architecture - automatization

32 PG outputs

- Appliance operation, electric lock operation
- Status indication (garage door open longer than 30 min. etc.)
- Bus and wireless modules for PG outputs



Not just a security system, it can do so much more…

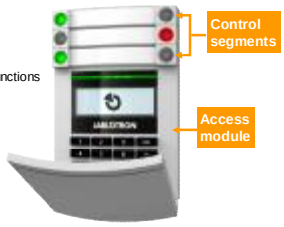
Architecture - automatization

32 PG outputs – setting by Flink SW

Architecture - control

Keypad with a patented control system

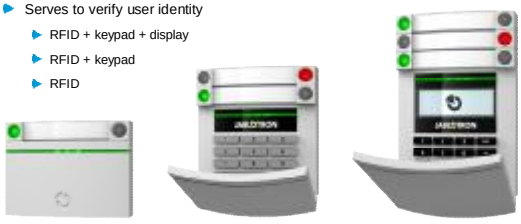
- Easy
  - Easy and well arranged
  - Like traffic lights
- Smart
  - Control segments with variable functions
- Flexible
  - Fits exactly to a specific building
  - Size and functions



Architecture - control

Access module

- Serves to verify user identity
  - RFID + keypad + display
  - RFID + keypad
  - RFID

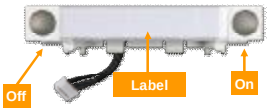


The golden middle way…

Architecture - control

Operating segment

- Flexible function
  - Set/unset a section
  - Set partly/Set totally/Unset a section
  - PG on/off without authorization
  - PG on/off with authorization
  - Emergency (health, fire, attack) without authorization
  - Emergency with authorization
  - Section status indication
  - PG indication



Turn around 360° and click. Undo with a screw driver from the side. Do label printing using F-Link.

Architecture - control

Customized keypad

- Access module
  - According to the needs of customers
  - Chip (Card) / Code / Display
  - Always 1 control segment
- Control segments
  - Guarding, appliances, emergency, indication
  - Max. 20
- Set up in F-Link program
  - Graphical display
  - Label printing for the segment

Control panels

2 control panel sizes

- JA-106K
  - Large housing (power supply, space for backup battery)
  - Large BUS systems
  - Large wireless systems
- JA-101K
  - Smaller housing
  - Small BUS systems
  - Medium-sized wireless systems.

Control panels

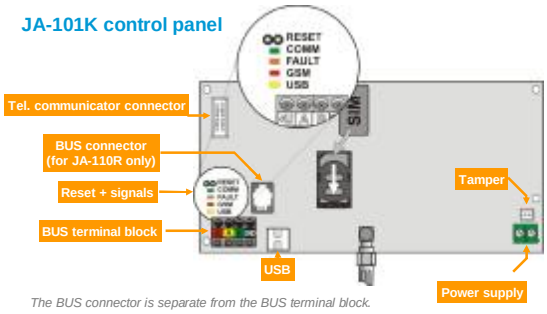
JA-101K control panel

- Security level 2
- Contains GSM communicator
- 1GB memory card
- 2.6 Ah backup battery
- Continuous consumption 125 mA

Extension – larger Oasis. Does not include LAN.

Control panels

JA-101K control panel



The BUS connector is separate from the BUS terminal block.

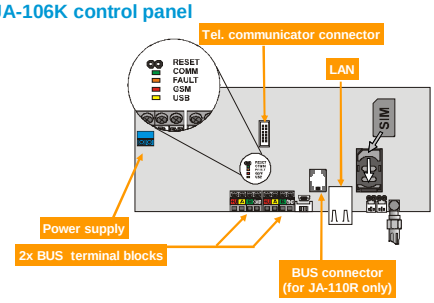
Control panels

JA-106K control panel

- Based on the JA-101K
- Full system capabilities
  - GSM and LAN communicator
- 2 BUS connectors
  - 2 x 500 m cables
- 18 Ah backup battery
  - Continuous consumption 1 A

Control panels

JA-106K control panel



Control panels

2 control panel sizes

Features	JA-101K	JA-106K
max number of zones	50	120
max number of users	50	300
max number of independent sections	6	15
max number of progammable outputs	8	32
GSM/GPRS communicator	YES	YES
IP LAN (Ethernet) communicator	NO	YES
SMS reports and remote control by mobile phone	up to 8 users	up to 30 users
recommended backup battery 12V	2.6 Ah	18 Ah
maximum continuous output load	125mA	1.2A
max intermittent output load	1A	2A

The units have a defined current consumption for backup purposes.

Architecture - radio

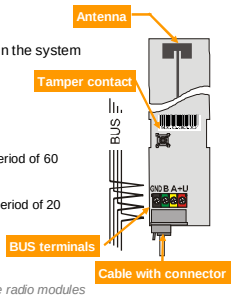
JA-110R radio module

- Two main ways to install it
  - Direct installation into the control panel
    - RJ connector in the control panel
  - Installation on the BUS
    - Standard bus terminals

Architecture - radio

JA-110R radio module – inside

- It is addressable – occupies one position in the system
- Powered by BUS
- Enrolled by pressing TMP
- Monitors the radio interference level
  - LOW – interference longer than 30s in a period of 60 seconds
  - HIGH – interference longer than 10s in a period of 20 seconds



Devices are enrolled to the system, not to separate radio modules

System control

Operating options

JA-112E

JA-113E

JA-114E

JA-190J

JA-191J

JA-110I

For keypads 3 pairs of wires – if voice module is installed

System control

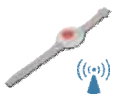
Control options - continuity

- In Oasis housings

JA-186JW

JA-185J

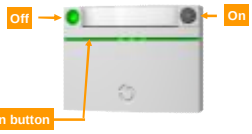
JA-187J



- Coming soon
  - A remote control in a new housing and with new features (2 and 4 buttons)

JA-112E BUS access module

- RFID reader only
  - Special RFID chips and cards
- Backlit button aggregates information
  - Control segments – specified info
  - SMS details
- For small buildings
  - Control by chip only
  - Lock control



Backlit button = general system situation (OK, Alarm, failure etc.). Enrolled by button pushing

JA-113E BUS access module

- RFID reader, keypad
  - Operated by code or chip
- Modular architecture
- Suitable for most buildings
  - Segments show system status
  - Setting/unsetting control, PG, emergency etc

The golden middle way. Enrolls by pressing the backlit button.

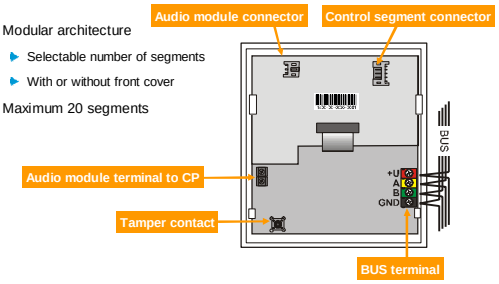
JA-114E BUS access module

- RFID reader, keypad, graphical display
  - Operated by code or chip + menu
- Graphical display
  - Details
  - Keypad menu
  - **i** Information button
- System Menu
  - Complete setting
  - More information

We also plan a voice module.

JA-114E BUS access module

- Modular architecture
  - Selectable number of segments
  - With or without front cover
- Maximum 20 segments



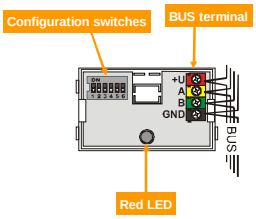
JA-110I BUS section indicator or PG output

- Optical signaling
  - Set/unset section status
  - PG output
- Device without an address
  - Does not fill up a position in the control panel

Several indicators can be set to signal the same section (several doors in a specific section).

JA-110I BUS section indicator or PG output

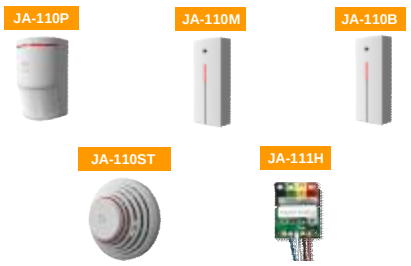
- The number of switches used is limited only by power consumption on the bus
- Same module settings will indicate identically
- Indicates EW or IW in the section



Detectors

JABLOTRON CREATING ALARMS

BUS detectors – JA-11x series



Detectors

JABLOTRON CREATING ALARMS

JA-110P BUS PIR motion detector

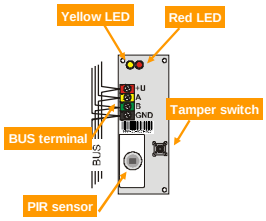
- Viewing angle 110°/12m
- 2 immunity levels against false alarms
  - Standard
  - Increased
- Optional signaling function
  - Yellow blinking = detector is not assigned
  - LED lights = failure
  - Red = activation, alarm memory

Detectors

JABLOTRON CREATING ALARMS

JA-110P BUS PIR motion detector

- Pulse reaction
- Detector internal setting – Flink SW
- Enrolled to the system by
  - pressing tamper
  - Entering production code



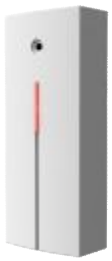
Alternative lenses –PET JS-7906, vertical curtain JS-7901 and long corridor JS-7904.

Detectors

JABLOTRON CREATING ALARMS

JA-110M magnetic door detector

- Occupies 2 positions
- Status reactions
- 2 alarm inputs
- Enrolling to the system
  - Pressing tamper
  - Entering production code



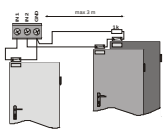
Max. length of input cable 3 m. Balanced 1k.

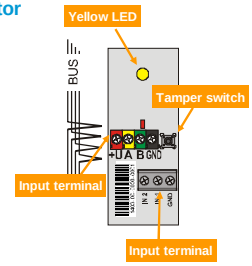
Detectors

JABLOTRON CREATING ALARMS

JA-110M magnetic door detector

- Internal setting – Flink SW
  - Input reaction (Balanced yes/no, OFF)
  - Input reaction delay (0.1s to 300s)
  - Inverted input reaction (NC / NO)
  - LED indication enabled



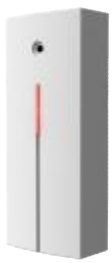


Detectors

JABLOTRON CREATING ALARMS

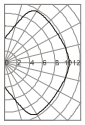
JA-110B BUS glass-break detector

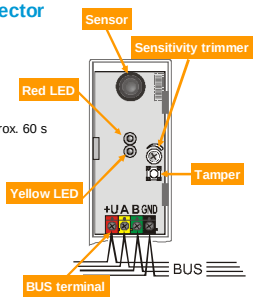
- Dual method for detection
  - Air pressure changes
  - Sound of breaking glass
- Pulse reaction
- Enrolling by
  - Pressing tamper
  - Entering production code



JA-110B BUS glass-break detector

- Detecting distance up to 9 m
  - Min. glass area size 0.6 x 0.6 m
- Setting the sensitivity – by a trimmer
  - GBT-212 tester, stabilization time approx. 60 s
- LED indication of activation





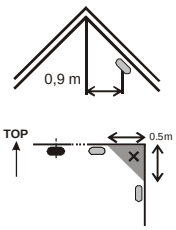
JA-110ST BUS combined smoke and temper. detector

- Logic of alarm indication
  - Smoke
  - Temperature
  - Smoke or temperature
  - Smoke and temperature
- Testing 1x in 30 days
  - By test spray
  - **Never by fire**
- A fault is signaled by a yellow light

Enrolls to the system by covering the housing.

JA-110ST BUS combined smoke and temper. detector

- Fire certification
  - EN 54-5 smoke
  - EN 54-7 heat
  - EN 54-25 radio smoke detectors
- Important for installation
  - Max. coverage 150 sq. meters (one detector)
  - The best position
    - Sloping ceilings
    - Center of the room



BUS module for JA-111H connecting detector

- For non-BUS detector connection
- Activation and tamper inputs
- Selectable reactions in the system
- Detector power supply - max. 50mA
  - Take into account when calculating backup time
- Activation input
  - Time filter
  - Input logic (NO/NC)
- We cannot guarantee the functions of connected detector

The detector power supply isn´t protected against overcurrent. The syst. wires don´t extend to the detect. !

Wireless detectors

- JA-15x series
  - New housing in JABLOTRON JA-100 design
  - Powered by alkaline batteries
  - Lifetime min. 2 years
- JA-18x series
  - In Oasis housings
  - We will gradually convert to new housings
  - Some devices will remain

JA-150P

JA-151M

JA-180W

JA-188P

JA-150P wireless motion PIR detector

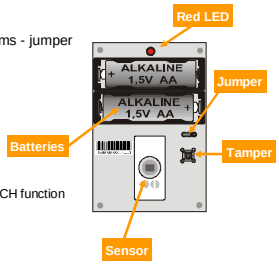
- 2 working modes for the detector
  - **Smartwatch – for real time detection**
    - Typically residential areas (large motion in unset mode)
    - Motion sent to the control panel in 3 x 20 s mode, after 1x 2 min
    - If no motion for 10 min, restores mode 3 x 20 s
    - Default setting
  - 1 min sleep mode

Pushed/unpushed TAMPER when inserting the battery selects working mode.

Detectors

JA-150P wireless motion PIR detector

- Detection range 110°/12m
- 2 immune levels against false alarms - jumper
  - Normal
  - High
- Red light
  - 15 min testing mode
- Battery lifetime – 2years
  - Longest lifetime with SMARTWATCH function

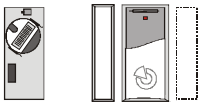


Alternative lenses.

Detectors

JA-151M mini wireless magnetic detector

- Compact dimensions (55 x 26 x 16 mm)
- One magnetic sensor
  - Both-sided installation is possible
- Status and pulse reactions
- Radio range up to 200m (open area)
- Enrolling by inserting batteries
- CR-2032 battery
- Typical lifetime 2 years (20 activations/day)



Pushed/unpushed TAMPER
when inserting the battery selects reaction – status/pulse.

Detectors

JA-18x Wireless detectors

- Motion PIR and combination detectors
  - JA-185P – mini-size wireless motion detector
  - JA-180W – PIR/MW motion detector
  - JA-180PB – PIR/Glass break detector
  - JA-186P - dual-zone (PET immune) PIR motion detector
  - JA-188P – dual-zone outdoor PIR detector
- Magnetic detectors
  - JA-181M – magnetic door detector & universal transmitter
  - JA-182M – magnetic door detector
  - JA-183M – magnetic compact door detector

Detectors

JA-18x Wireless detectors and devices

- Environmental detectors
  - JA-180G - gas detector
- Control
  - JA-186JW – remote keyfob white
  - JA-186JB – remote keyfob black
  - JA-185J – remote control (suitable for cars)
  - JA-187J – wrist button
  - JA-188J – wall button
  - JA-189J – doorbell button

Output equipment

Output equipment

- Sirens, PG outputs
- Bus and wireless versions (only bus at the moment)
- Communicators – part of the control panel

JA-110A

JA-111A

JA-111N

JA-110N

Output equipment

JA-110A Bus internal siren

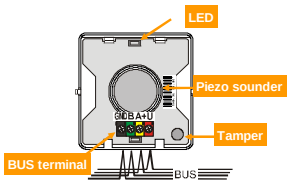
- Alarm siren (with section assignment)
- Accoustic PG signaling
- Set and unset status change signaling
- Entrance and exit delay signaling
- Button – optional functions
  - Alarm muting, not cancelling alarms + intruder confirmation sent to ARC
  - Silent panic alarm

Enrolls to the system by pressing the button.

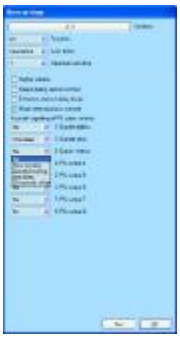
Output equipment

JA-110A Bus internal siren

- Internal settings programmed by Flink SW



Enrolls to the system by pressing the button.



Output equipment

JA-111A BUS external siren

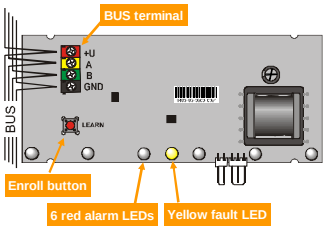
- Back-up siren (with section assignment)
- Acoustic PG signaling possible
- Set and Unset status signaling possible (chirp)
- Backup battery
- If power supply lost, sounds for 3 minutes
  - Not when system is in service mode

If power supply is lost due to empty backup battery in the control panel, it does not sound.

Output equipment

JA-111A BUS external siren

- Internal setting programmed by Flink SW



Output equipment

JA-110N/JA-111N BUS PG relay module

- JA-110N - 16A/250V – power switching relay
- JA-111N – 2A/120V – low power switching relay
- Switch contact
- Has no address
  - DIP switch selects which PG o/p

BUS components

BUS creation

CC-01

CC-02

JA-190PL

JA-110T

JA-110Z-A

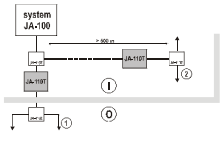
JA-110Z-B

Bus components

JA-110T BUS short circuit isolator module

- Protecting the digital BUS in outside areas
- Isolates two parts of the bus (NOT electrically)
- Should be installed in the inside guarded area
  - into JA-190PL
  - Into a control panel
  - Into a standard mounting box
- Do not connect multiple isolators in series

I – inner (guarded) area
O – outer (unguarded) area
1 – separation of the outer bus branch
2 – bus length extension over 500m



Bus components

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JA-110Z and JA-111A BUS splitting module

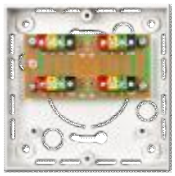
- Installed
  - into JA-190PL installation box
  - into control panel
  - into a standard mounting box
- For terminal blocks
- PG modules etc.
- Certification for installation on a flammable surface

Bus components

JABLOTRON CREATING ALARMS

BUS splitting

- JA-190PL installation box
  - For terminal blocks
  - Isolators modules
  - PG modules etc.
  - Certification for installation on a flammable surface



The bus components

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JA-100 JABLOTRON system installation

- Connect USB cable
  - A driver does not need to be installed
- Activate F-Link
  - Download
  - Install the SW
- Set up parameters and functions
  - Bubble help

Let's see a window. A practical part will be held during tomorrow's workshop

JABLOTRON JA-100

JABLOTRON CREATING ALARMS

Questions?

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Thank you

End of 2nd part