JA-152KRY control panel of the JABLOTRON Mercury alarm system Installation manual

Control panel type:CU2201MD communicator type: GSM2202MD

Caution:

1. The JABLOTRON Mercury alarm system is only intended to be installed by a trained technician with a valid certificate issued by an authorized Jablotron distributor.
2. JABLOTRON Mercury control panels are configured using the MyCOMPANY mobile application. The credentials are given to the Jablotron Installation Partner upon successful completion of the certification training.
3. JABLOTRON Mercury control panels are equipped with integrated connectivity via a specific SIM card - do not remove or replace the SIM card.
4. The JABLOTRON Mercury Alarm requires a regular monthly payment for JDS (Jablotron Digital Service) service. The payment method depends on the country where the system is installed. If the service is not paid for, full system functionality will be restricted. The system will remain fully operational (locally), but the ability to control it via MyJABLOTRON and configure it via MyCOMPANY will be suspended. The user will be informed of this impending restriction in advance by email to the address provided when registering the system.
5. The overview of supported devices, see Appendix no.1.

1. The control panel basic description

1.1. Description of the control panel

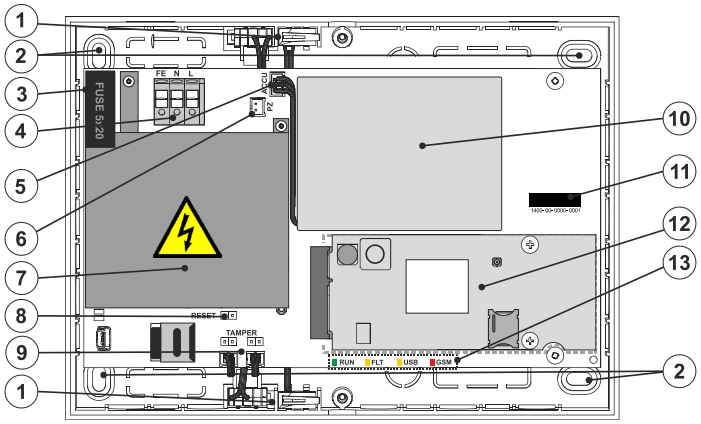


*Fig.1 control panel box: **1** – tamper contact of the box; **2** – holes for mounting the box on the wall; **3** – fuse; **4** – mains power supply terminal; **5** – backup battery connector; **6** – acoustic indicator connector; **7** – power supply cover; **8** – RESET jumper, **9** – control panel box tamper contacts connectors; **10** – backup battery; **11** – control panel serial number; **12** – GSM communicator; **13** – control panel LED indicators*

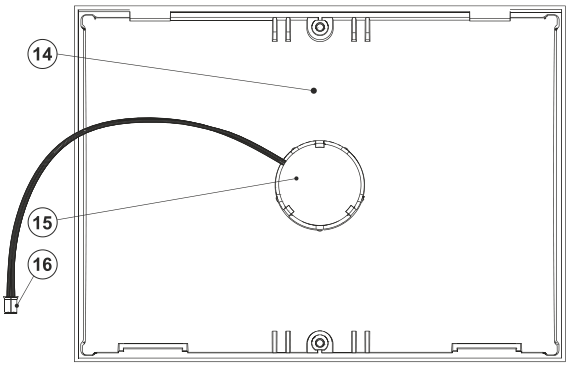


*Fig.2 control panel cover: **14** – control panel cover; **15** – acoustic indicator; **16** – connector of the acoustic indicator*

1.2. LED indicators on the control panel mainboard (13)

RUN	Green	Flashing indicates the control panel normal operation mode.
FLT	Yellow	Permanent lit of yellow LED indicates general fault in the system.
GSM	Red	– lits permanently after the power is connected => logging into the GSM network (max. 1 min), – off if the GSM is OK and no communication takes place, – flashing in 1 s intervals, if no GSM network is available.

2. Before system installation

1. First, consider how to secure the object, the arrangement of individual devices and the number of sections, and how to control the system.
2. Wireless devices must be installed in such a way that their radio communication is not shielded or interfered with. During installation, always check the signal quality of individual devices directly in MyCOMPANY app.
3. Select a hidden place for the control panel (inside the protected area) where mains power is available and there must also be a good GSM signal reception (LTE).
4. The requirements of the relevant standards must be respected during the design and installation of the alarm.

3. JABLOTRON Mercury installation procedure

Caution:



- **The manufacturer accepts no liability for damages if the system is improperly installed or programmed.**
- Check the GSM network signal quality on the installation using your cell phone.
- Only a person with a relevant electrical qualification may install the control panel mains supply. The control panel power supply has double safety circuit separation. The protective earth wire of the mains supply (if used) can be connected to the FE terminal.
- Use a suitable double-insulated cable with a cross-section of 0.75 to 1.5 mm^2 for mains power supply.
- The control panel should be protected by a 6A circuit breaker.
- Never power the system on during the installation.

1. Using the drilling template, attach the control panel on the selected place. Do not connect the mains power yet.
2. Connect the mains power to the power supply connection terminals (4) in the range of ~110-230 V, 50-60 Hz. The control panel is a Class II double-insulated device, so use a two-wire supply (L and N conductors) to connect the mains power. The protective earth wire of the mains supply (if used) can be connected to the FE terminal. Check that the wires are well fixed in the terminal, then fix the cable firmly with the clamp.
3. Insert the backup battery (10) into the control panel (see Fig.1) and fix with double-sided adhesive tape. Use only batteries recommended by the manufacturer **Li-ion Polymer 3.7V / 5000 mAh**.
   Warning – the backup battery is delivered in charged condition; it must not be short-circuited!
4. Connect the backup battery connector (5) to the control panel mainboard.
5. Switch the mains power on for the control panel and wait until the system logs into the GSM network (red LED goes OFF).
6. Launch the MyCOMPANY configuration app on your smartphone and log in with the details you obtained after the certification training.
7. Click on the "NEW INSTALLATION +" button to start the configuration (Fig. I).
8. Scan the barcode of the control panel serial number (11) and wait for confirmation of the connection (Fig. II).
9. Enter the name of the installation and fill in the owner's email, which will be the login to the MyJABLOTRON user application (a confirmation about the account creation will be automatically sent to the email along with the login data).
10. Wait for the registration and initial activation of the control panel to complete.
11. In the "Periphery management" module, enter the Control panel item, click Status, and check the GSM network signal quality (%) (Fig. III).
12. Then, in the "Periphery management" module, use the "Add a peripheral" button to scan the serial number of the first device (you can find it on the PCB, on the back of the device or on the paper box of the product) (Fig. IV).
    Follow the instructions in the mobile app.
    a) insert batteries into Wireless device,
    b) close the device's cover and locks it by a screw from the accessory.
    c) enter the name of the device in the application and set other parameters if needed,
    d) wait until the connection with the device is established and select Save in order to return to Periphery management,
    e) if the connection is not established, open and close the device cover (or remove and reinsert the batteries).
    f) repeat the procedure for all installed devices, or remote controls (with the remote controls the connection is established by pressing any button),
    g) the goal is complete list of all devices with OK status.
13. In the "User Management" module, create the users (for assigning tags and cards, we recommend selecting the "Attaching the card to the keyboard" enrolment method). Do not forget to change the codes for the SERVICE and MASTER users (Fig. V).
14. Check the functionality of all devices using the " Testing the peripherals" module (Fig. VI).
15. Connect the acoustic indicator (16) to an appropriate connector (6) then close the control panel box.
16. If everything is OK, using the MyCOMPANY application quit the Service Mode of the control panel and test the alarm operation.

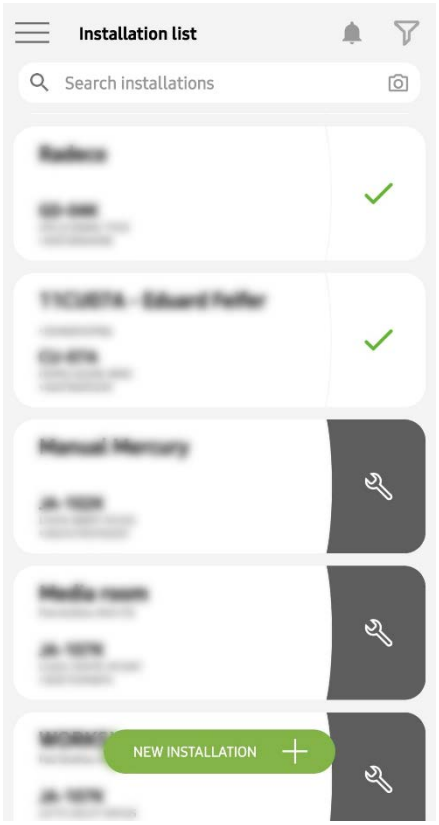


Fig. I



Fig. II

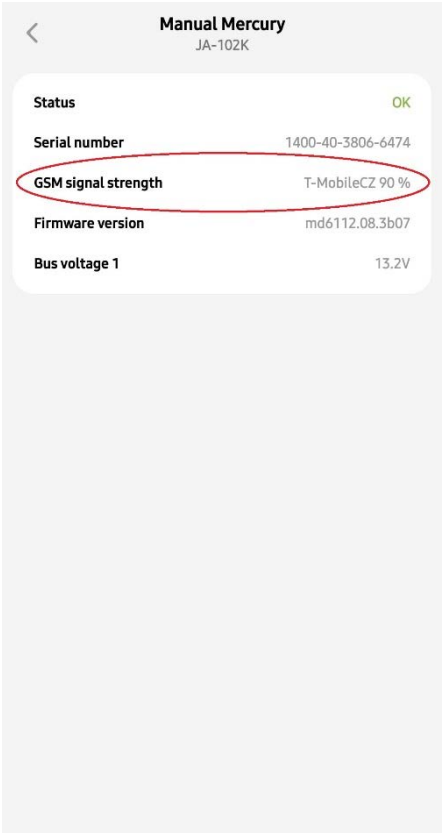


Fig. III

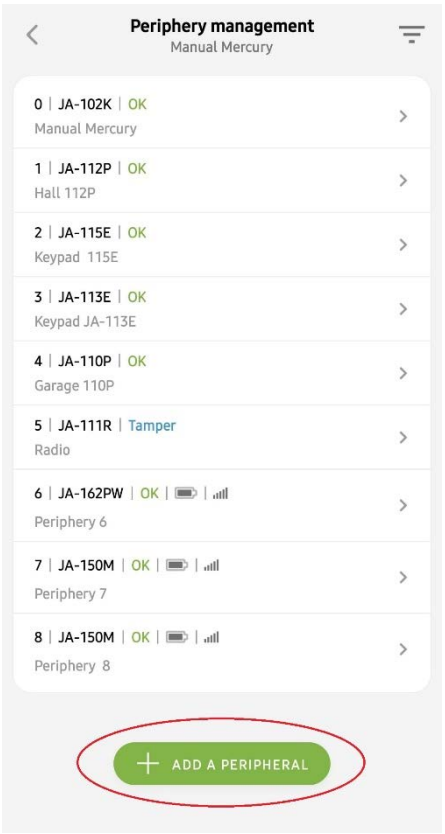


Fig. IV

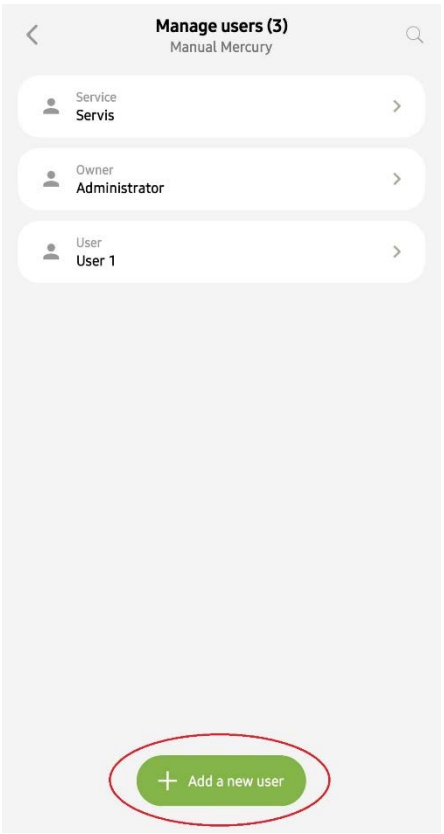


Fig. V

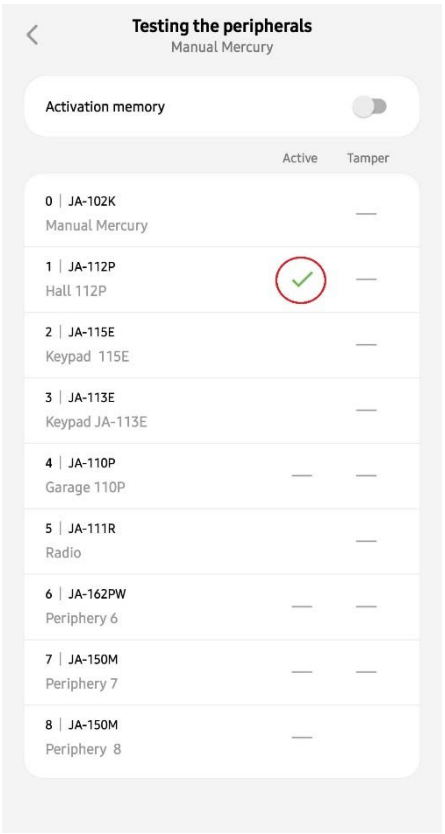


Fig. VI

4. Alternative configuration before system installation:

Preparation:

1. Connect the mains power to the power supply connection terminals (4) in the range of ~110-230 V, 50-60 Hz. The control panel is a Class II double-insulated device, so use a two-wire supply (L and N conductors) to connect the mains power.
2. Connect the backup battery (10) to an appropriate connector (5) on the control panel mainboard and switch the mains power on for the control panel and wait until the system logs into the GSM network (until the red LED turns OFF).
3. Launch the MyCOMPANY configuration app on your smartphone and log in with the details you obtained at the certification training.
4. Click on the "NEW INSTALLATION +" button to start the configuration (Fig. I).
5. Scan the serial number barcode of the control panel (11) and wait for confirmation of the connection (Fig. II).
6. Enter the name of the installation and fill in the owner's e-mail, which will be the login to the MyJABLOTRON user application (a confirmation about the account creation will be automatically sent to the email along with the login data).
7. Wait for the registration and initial activation of the control panel to complete.
8. **Do not insert batteries into devices.**
9. In the "Periphery management" module, use the "Add a peripheral" button to scan the serial number barcode of the first device (it can be found directly on the PCB, on the back of the device or on the paper packaging) (Fig. IV).
    a) enter the name of the device in the application and set other parameters if needed,
    b) tap the “Save” button to return to Periphery management (without establishing a connection),
    c) make a note about planned location of the device,
    d) repeat the procedure for all installed devices and remote controls,
    e) in the list of devices, it will be indicated that the connection has not been established.
10. In the "User Management" module, program the users (Fig. V).
11. Switch off the power to the control panel and disconnect backup battery connector (5). Quit the application.

The real installation and making it work:

12. Using the drilling template (see the accessory) prepare the holes and install the control panel on the selected place. Do not connect mains power yet.
13. Mount the devices at the required place.
14. Connect the mains power for the control panel (see chapter 3.2.).
15. Insert the backup battery (10) into the control panel (see Fig.1) and fix with double-sided adhesive tape.
    Warning – the backup battery is delivered in charged condition; it must not be short-circuited!
16. Connect the backup battery connector (5) to the control panel mainboard.
17. Switch the mains power on for the control panel and wait until the system logs into the GSM network (red LED goes OFF).
18. Launch the configuration application MyCOMPANY and enter the previously saved installation (configuration is loaded).
    If you have forgotten where the device is to be mounted, use the app and in Periphery Management, add the device by reloading the barcode - you will see the settings you made earlier, including the location name.
19. In the " Periphery management " module, enter the Control panel item, click “Status”, and check the GSM network signal quality (%) (Fig. III).
20. Prepare batteries for the wireless devices.
21. Open gradually the settings for each device in “Periphery Management”, insert batteries and close the covers (press any button on the remote control). Wait for the connection to be established and proceed to the next device. Lock the cover with a screw from the accessory. If the

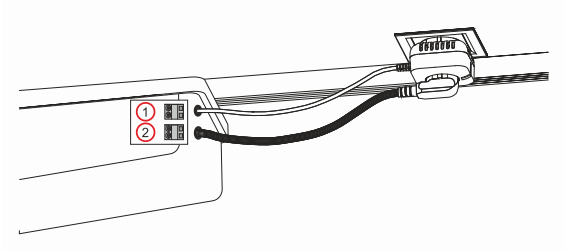
connection is not established, open and close the device cover (remove and reinsert the batteries or press any button in the case of a remote controller).

22. Check the status and configuration of each device in “Periphery Management”, so that all devices indicate OK (Fig. IV).
23. Check the user settings in the “User management“ module and don't forget to change the Service and Administrator access codes (Fig. V).
24. Check the functionality of all devices using the " Testing the peripherals" module (Fig. VI).
25. Connect the acoustic indicator (15) to an appropriate connector (6) then close the control panel box.
26. If everything is OK, leave the Service Mode of the control panel and test the alarm operation.

5. Control of garage doors and entrance gates (or other devices)

1. JABLOTRON Mercury allows you to control (from the user application, using the bottom pair of buttons on the remote control or by a keypad) the opening of the garage doors, the entrance gate or the other technology.
2. The control panel has 2 preset control outputs for this purpose. Editing the names and testing of the outputs is done by the MyCOMPANY application in the module "Other" - Control outputs.
3. If an output is activated from the MyJABLOTRON app or by pressing a button on the remote control, the appropriate output switches ON.
4. Connection of the controlled device must be realized by an appropriate output relay module or a pass-through socket with an output for garage door control.
5. The outputs can be used to control any device that can be controlled by a triggering 1s pulse or function ON/OFF.

Example of garage door control using the JB-162N-PLUG



1 – terminals of the drive control input (potential-free contact); 2 – 230 V (AC) drive power supply terminals

6. Wireless doorbell

Using the JA-159J wireless doorbell button and the JA-152A wireless indoor siren, the wireless doorbell function is automatically activated. The doorbell sound is indicated by the speaker in the control panel cover or by any enrolled indoor siren JA-152A. If you install multiple doorbell buttons, they can all trigger the sound of the doorbell on all wireless sirens of that type and also speaker in the control panel cover.

7. Thermometers

The JA-151TH thermometers can be enrolled to the control panel. The measured temperatures are then shown in MyJABLOTRON application. The temperature from one thermometer can also be displayed on the keypad LCD.

8. Reset of the control panel

If it is necessary to return the control panel to the factory settings:

1. Open the control panel cover: the tamper contact (1) must be activated to reset.
2. Turn off the mains power of the control panel and disconnect the backup battery (10).
3. Connect the pins on the control panel board marked RESET (8) (using the supplied jumper).
4. Connect back the backup battery (10) and then the mains power of the control panel. The green, yellow and red LEDs (13) on the control panel will be lit next to the reset jumper.
5. Wait about 15 s and then disconnect the jumper.
6. Then all the LEDs (13) flash shortly to confirm that the panel reset is complete. The control panel is then rebooted.
7. The control panel has been reset to factory settings, and system language as well. However, resetting the control panel does not erase the event history.
8. If you want to use the control panel on another installation, you must deactivate the control panel in the MyCOMPANY application first and go to the “Other” – “Device Management” tab. This will delete its configuration and the access of the current administrator in MyJABLOTRON.

9. Technical specifications

Parameter	CU2201MD, GSM2201MD
Installation type	Fixed installation
Control panel power supply	~ 110 – 230 V/50 – 60 Hz, max. 0.28 A with F1.6 A/250 V fuse, security grade II
Electrical power / current	Max. 23 VA / 0.1 A
Protection class	II.
Back-up battery.	3.7V, 5000 mAh, Li-Polymer
Low battery backup voltage (fault indication)	≤3.5V
Maximum battery recharge time (80% capacity)	72 h
Maximum number of sections	4
Maximum number of devices	31 devices + 31 remote controllers
Maximum number of users	32
Max. number of programmable PG outputs	2
Alarm connections	**Wireless connection– unspecified wireless connection, Jablotron wireless protocol**
Classification of Alarm device	**Security Grade 2 / Environment Grade II**
@ According to standards	**EN50131-1, EN 50131-3, EN 50131-6, EN 50131-5-3, EN 50131-10, EN 50136-1, EN 50136-2**
@ Environment	**Indoor general**
@ operational temperature range / humidity range	**-10 °C to +40 °C / 75% RH without condensation**
@ power supply	**Type A – primary mains power supply with a powered back-up battery.**
@ event memory capacity	approx. 7 million events, including sources and timestamps.
@ system reaction to loss of device communication	Fault or Tamper – Dependent on selected profile @ wireless communication within 2h (from last communication) @ Wireless communication within 20min blocks section setting
@ system reaction to incorrect code entry	Alarm after 10 wrong code entries, dependent on selected profile, the system will be locked for ten minutes.
@ ATS classification	Supported ATS classes: SP2 – SP5, SPT: type Z Operation type: Pass-Through GSM2201MD SP3 – SP5 (JABLO IP, ANSI SIA, DC-09)
@ ATS Alarm transmission protocols	JABLO IP
@ ATC security against substitution and protection of information	Jablotron protocols: proprietary AES encryption with a minimally 128 bit key ANSI SIA DC-09.2012 protocol with 128 bit AES encryption
Dimension	182 x 132 x 58 mm
Weight with battery / without battery	510 g/430 g
Based parameters of the JA-111R module	868.1 MHz, < 25 mW, GFSK < 80 kHz
Radio emissions	ETSI EN 300 220-1,2
EMC	EN 50130-4, EN 55032, ETSI EN 301 489-1, ETSI EN 301 489-3
Safety conformity	EN IEC 62368-1
Conditions of operation	ERC REC 70-03
Certification body	TREZOR TEST (no. 3025)
GSM communicator	
Module power supply	8–15 V DC (from the control panel)
Average current consumption	Approx. 9 mA (depends on the GSM signal strength)
Peak current consumption	720 mA
GSM communication band:	
2G (GSM, EDGE)	900/1800 MHz
3G	900/2100 MHz (B8, B1)
4G (LTE)	800/900/1800/2100/2600 MHz (B20, B8, B3, B1, B7)
Compatible with RCT (ARC receiver)	according to communication protocols
SPT communicator type	SPT type Z (control panel expansion module)
AS/SPT interface	Pass-through

Supported ATS class/communication protocol:			Notes:
ATS class [1)]	ATS interface	Transmission protocol	1) The ATS classes listed in the ATS interface configuration with a transmission protocol is the maximum of what is possible to declare when creating an alarm communication path. The operational classification has to be determined by the installer after the ARC's agreement. The alarm communication path is created according to CLC/TS 50136-7 application guidelines. **Legend**: SPx: One communication path to an ARC (Single path) = 1 transmission medium
SP3 – SP 5	GSM-GPRS (IP)	JABLO IP ANSI SIA DC-9	
Complies			EN 62368-1, ETSI EN 301 511, ETSI EN 301 489-1, ETSI EN 301 489-52, ETSI EN 301 489-17, ETSI EN 301 908-1, ETSI EN 301 908-13, ETSI EN 300 328, EN 50665, EN IEC 63000, EN 50131-1, EN 50131-10, EN 50136-1, EN 50136-2, ANSI SIA DC-09
Can be operated according to:			CEPT/ECC/DEC/(04)06, ERC/DEC/(97)02, ECC/DEC/(06)01

JABLOTRON a.s. hereby declares that the CU2201MD, GSM2202MD are in compliance with the essential requirements and other relevant provisions of Directive 2014/53EU, 2014/35/EU, 2014/30/EU and 2011/65/EU. The original of the conformity assessment can be found at www.jablotron.com – the Download 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.

Electronic version of the manual

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10. Appendix no. 1 - overview of supported devices for the alarm JABLOTRON Mercury

Type	Description	Current consumption:
JA-155E	Wireless 4 segment keypad with LCD, controls up to 4 sections	4 x AA
JA-153E	Wireless access module with RFID and keypad	2 x LR6 AA
JA-150P	Wireless PIR motion detector	2 x LR6 AA
JA-150P PET	Wireless PIR motion detector with basic pet immunity	2 x LR6 AA
JA-151M	Wireless magnetic door detector – mini	1 x CR-2032
JA-152J MS II	Bi-directional two-button key fob	1 x CR-2032
JA-154J MS II	Bi-directional four-button key fob	1 x CR-2032
JA-180PB	Wireless PIR motion/glass-break detector	1 x CR14500 1 x CR14250
JA-180W	Wireless PIR + MW detector	1 x CR14500
JA-151ST	Wireless combined smoke and heat detector	3 x LR6 AA
JA-152P	Wireless PIR motion detector	1 x CR 123A
JA-155P	Wireless ceiling PIR motion detector	2 x CR 123A
JA-160PC	Wireless PIR motion detector combined with a camera	2 x LR6 AA
JA-160PC (90)	Wireless PIR motion detector with a photo verification camera 90°	2 x LR6 AA
JA-165A	Wireless outdoor battery-powered siren	BAT-100A.01
JA-152A	Wireless internal siren or an AC socket	BAT-3V2-CR2
JA-151ST-A	Wireless combined smoke and heat detector	3 x LR6 AA
JA-150M	Wireless magnetic detector with 2 universal inputs	1 x LR6 AA
JA-150N	Wireless power output module	230 V AC, 1.5W
JA-151N	Wireless signal output module	12V DC, 18/ 35 mA
JB-162N-PLUG	Pass-through socket with a controlled output (French)	110 – 230 V/ 1W
JB-163N-PLUG	Pass-through socket with a controlled output (Schuko)	110 – 230 V/ 1W
JA-162PW	Wireless dual PIR + MW motion detector	2 x CR 123A
JA-159J	Wireless doorbell button	1 x CR-2032
JA-162PB	Wireless combined PIR motion detector with glass-break detector	2 x CR 123A
JA-162PC	Wireless combined PIR motion detector with a photo verification camera	2 x CR 123A
JA-151TH	Wireless temperature detector	1x CR-2032

NOTES: