PAX
WIRELESS SERIES

TELETEK

# BRAVO Next

Wireless Alarm Control System

## Installation and Operation Manual

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## WARNINGS

**- Teletek Electronics JSC is not responsible for any damages caused on the BRAVO Next panel when the user uses other power adapter types with similar technical characteristics but not approved from the manufacturer.**

**- When changing batteries in BRAVO Next control panel or wireless PAX series devices, the user must use only the ones approved by Teletek Electronics JSC.**

**- The BRAVO Next panel is designed according and with conformity to high standards for test and operation for wireless alarm control systems. However, it is possible some limitations to occur in operation, due to low transmission power and limited frequency range:**

**A)** The receivers' operation could be disturbed or blocked by radio signals occurring on or close to their operation frequencies, regardless of the digital algorithm used.

**B)** Every receiver can respond to only one transmitted signal at a time.

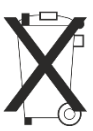
**C)** All wireless devices should be tested regularly with purpose to find any sources of interference and to protect the whole system against unexpected faults.

**- The user must be cautioned that any changes or modifications of the BRAVO Next panel and the wireless periphery, which is not specially approved by Teletek Electronics JSC, could void the supported documentation and guarantee services.**
**- Before any interventions in the device, the unit must be firstly disconnected from AC mains. The unit should be mounted and serviced only by authorized persons with proper electrical knowledge.**

**Attention:**
This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer.
The entire manual should be carefully read!

**The information in this manual is a subject to change without notice!**

### *Environmental Protection*



**Directive of batteries disposal – Information for the user (2013/56/EO)**

The used batteries from devices, after changing with new ones, should not be disposed together with another household waste. The chemical elements, used in the batteries can seriously harm the man's health and the outdoor environment.
The recycling of the used batteries and waste of batteries contributes for protection, keeping clean and improving the outdoor environment.

# GENERAL INFORMATION

## 1. General Information for the System

BRAVO Next is a wireless alarm control panel suitable for installation in residential houses and small offices. The panel has built-in Bluetooth module for quick programming, device enrolment and settings.

The system is very easy to control via key fobs, wireless keyboard or Home ProTTEct smartphone application*. Optional Bluetooth disarming using Home ProTTEct smartphone application is available.
**requires GPRS or LAN module installed to the panel*

Up to two communication modules (GPRS, LAN, PSTN, PSTN VD or MIO) can be added to the system for programming via Ajax SP web interface or Home ProTTEct smartphone application.

The programming of parameters is done via specialized ProsTE software using standard USB – micro USB cable; or via Bravo SetAPP smartphone application and enabled Bluetooth connection with the panel.

**Supported types of wireless peripheral devices:**

- **PAX PIR** - Indoor motion PIR detector
- **PAX 2PIR/AM** - Outdoor dual PIR detector
- **PAX 3Tech/AM** - Outdoor dual PIR and MW detector
- **PAX MC1** - Magnetic contact with one input
- **PAX MC2** - Magnetic contact with two inputs
- **PAX FL** - Flood detector
- **PAX FD** - Fire detector
- **PAX RC** - Control key fob, 4 buttons
- **PAX Panic** - Control key fob, 1 button
- **PAX KBD** - Control keyboard
- **PAX SR INTR** - Indoor sounder
- **PAX SR EXT** - Outdoor sounder

### Technical and Functional Characteristics

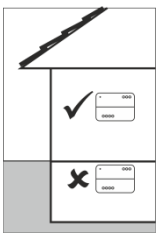
| | |
|---|---|
| **General for the Panel** | |
| - Type of the indication | LED |
| - Areas | 1 |
| - Max. zones/ detectors | 16 (including PIR, MC, FL, FD) |
| - Max. key fobs | 8 |
| - Max. keyboards | 1 |
| - Max. sounders | 2; 102dB |
| - Built-in sounder | 85 dB |
| - Memory LOG file | 300 events |
| **Wireless connection** | |
| - Frequency | 868MHz – 869MHz (Adaptive Frequency Agility Algorithm) |
| - Communication type and protocol | Two-way, Beacon+ |
| - Bluetooth | YES; Built-in |
| - Signal coding | YES; According the requirements of EN50131 Grade 2 |
| - Detecting of radio interference | YES; According the requirements of EN50131 Grade 2 |
| **Main power supply of the panel** | |
| - BRAVO Next EXT | External power supply 5 VDC/ 1A |
| - BRAVO Next INTR | Built-in power supply unit: 100-240 VAC; 50-60Hz |
| - Internal Protection | Resettable 2.5A Fuse, 250 VAC |
| **Consumption** | |
| - BRAVO Next EXT | 200mA |
| - BRAVO Next INTR | 150mA |
| **Back-up power supply of the panel** | |
| - Battery | 1 x 3.7 V/ 4100mAh, Li-Po (Type A according EN50131 Grade 2), max. size 80x65x10mm |
| **Environment** | |
| - Operation temperature | -10°C up to +40°C, Class II (indoor mounting) |
| - Relative humidity | 93% @ +30°C |
| - Size | 220x160x38mm |
| - Weight, kg | BRAVO Next EXT - 1,223kg; BRAVO Next INTR - 1,376kg |
| - Material, color | ABS plastic, white (RAL 9016) |

## GENERAL INFORMATION

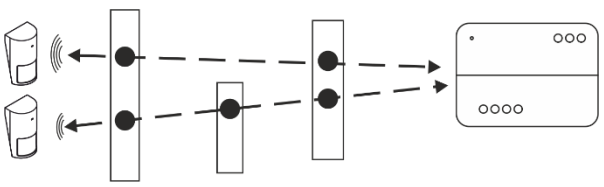
### 2. Planning Your Wireless System

In order to achieve the best efficiency of your wireless system, prior to installation plan the location of the control panel and the wireless devices within the premises.

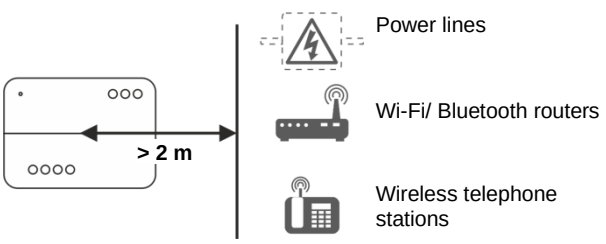
- The installation place of the control panel should be in premises located above the ground level.



- Reduce the number of obstacles between the control panel and the wireless devices to obtain a stronger signal.



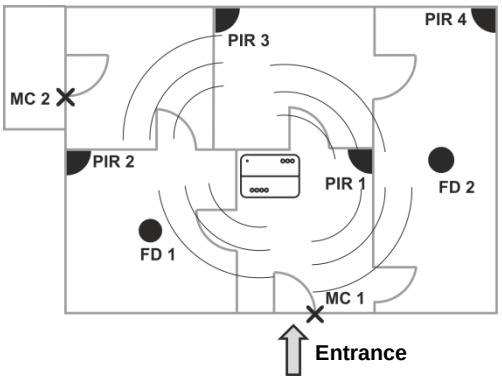
- The control panel should be installed in a minimum distance of at least 2 meters far from other sources of radio signals (Wi-Fi or Bluetooth routers, wireless telephone stations, etc.).



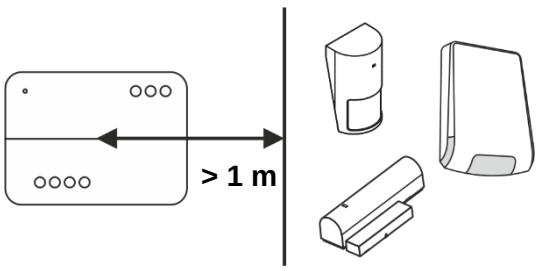

**ATTENTION:** Do not install the panel close to sources of strong radio fields as these can cause interference and thus diminish the serviceability of the system and its radio band.

**IMPORTANT NOTE:** You should consider also that the presence of electromagnetic disturbances may trigger the near field sensor (for PAX devices where such is used) and to turn on the background lights of the device!

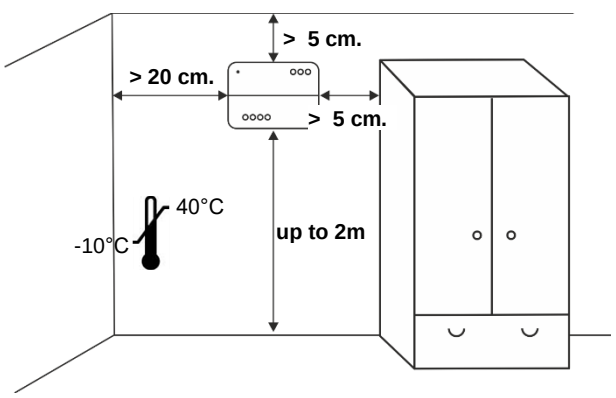
- The control panel should be installed approximately within the center of the protected premises.




The minimum distance between the panel and enrolled peripheral devices must be 1 meter to guarantee the proper operation of the system, including in test mode.




- In case of installing the control panel in a corner, leave the following minimum distances:
  - 20 cm on the left side surface to provide a free access to the USB interface input for programming with ProsTE software;
  - 5 cm on all other sides of the box for providing a proper ventilation.

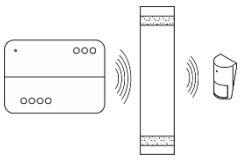



**ATTENTION:** The control panel installation location should be dry and should not be subjected to harsh temperature changes.
The control panel should be installed close to grounding and telephone cables.

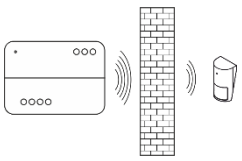
## GENERAL INFORMATION

- The construction and the width of the walls between the premises also affect the radio signals transmitted between the devices and the control panel.

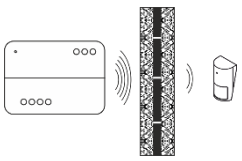
  **Attention:** In the table below are listed approximate values!



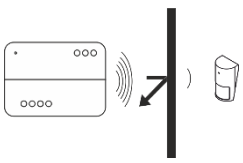
The quality of the radio coverage and signal strength is reduced with **10-20%** in premises with **plasterboard and wood walls**.



The quality of the radio coverage and signal strength is reduced with **30-40%** in premises with **brick walls**.



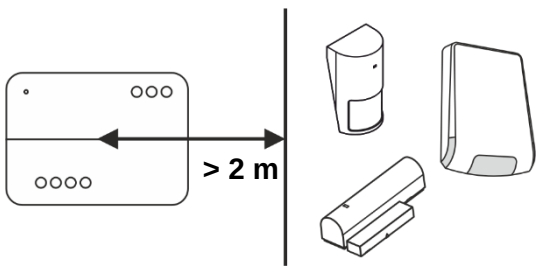
The quality of the radio coverage and signal strength is reduced with **40-60%** in premises with **concrete and building blocks walls**.



The quality of the radio coverage and signal strength is reduced with **80%, and sometimes with 100%** (full reflection) in premises with **metal walls or surfaces**.

**ATTENTION:**
If you need to increase the panel's sensitivity for receiving the signals from the wireless devices (because of specific conditions in the premises, like reinforced walls between the rooms, security zones in a great distance from the panel, etc.), you can make additional settings in the panel – move the dip switch 8 in ON position – see section "Hardware setting" (item 4).

**In increased sensitivity for receiving signals operation mode**, the minimum distance between the panel and enrolled peripheral devices must be 2 meters to guarantee the proper operation of the system, including in test mode.



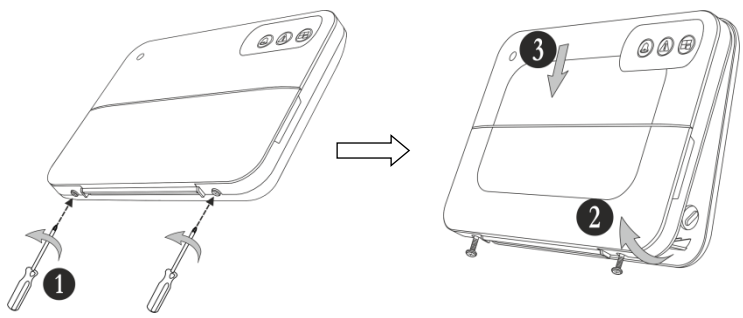

## 3. Basic Steps for Installation

**ATTENTION:** The power supply of the panel must be protected by external circuit breaker with rating 10A/B characteristics or better.

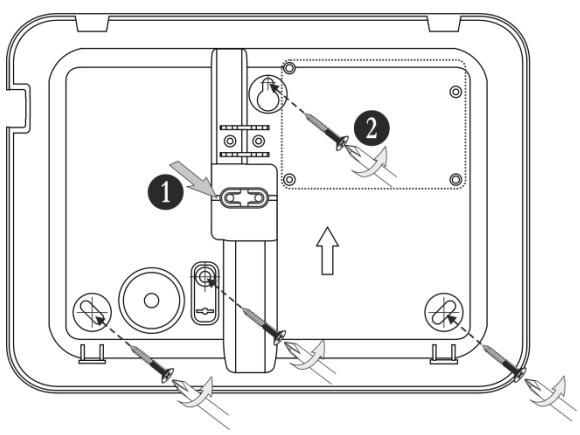
**Package contains:**
In the packing box of BRAVO Next INTR/EXT are included the following additional parts:
- 4 pcs anchors (ø6x30) and 4 pcs screws (3.5x30) suitable for mounting on brick wall. ***Note:*** *In case the panel needs to be mounted on other type of surface, it is required to use supporting elements that hold 900N downwards force.*
- 2 pcs screws for plastic 3x12 BN82428
- 1 pc jumper for setting options

### *3.1. Preparation for mounting*

- Undo the two screws holding the cover to the bottom and open the panel's enclosure.
  **Attention:** The screws are with interrupted thread and you do not need to undo them all. They must stay attached to the cover.




- Mount the bottom of the box as use appropriate fixing elements according the mounting surface.

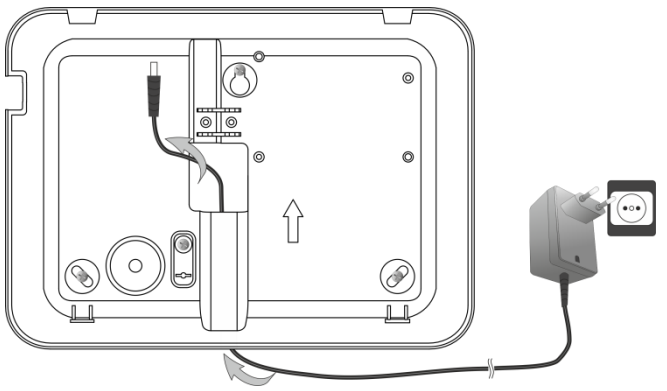



**1**. Break out the plastic cap from the bottom to fix the main power cable – see the steps for mounting of BRAVO Next INTR (item 3.3).
**2**. Fix the bottom to the mounting surface and level it horizontally before the final mounting with the supporting screws.

## INSTALLATION

### 3.2. Mounting and connection of *BRAVO Next EXT*

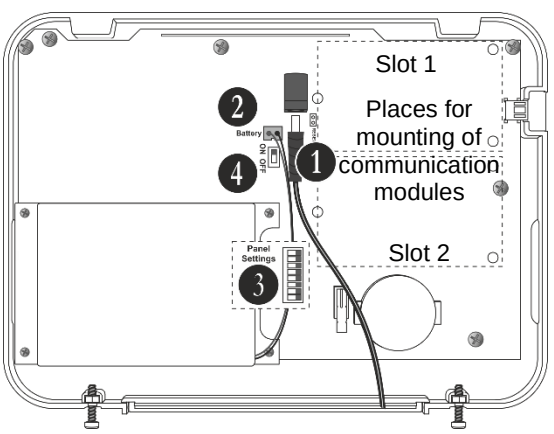
- Run the connector of the power adapter through the main cable channel and lead it on the internal side of the bottom.



The cable length of the power adapter is ~1700mm, so you must locate the panel installation place near a power socket.

**ATTENTION:** Use only the original power supply adapter 5V/ 1A, supplied with the control panel!

- Prepare the panel for connecting to the mains power 230V.




**1**. Connect the power adaptor connector to the input on the panel's PCB.
**2.** The cable of the battery must be connected to the "Battery" terminal.
**3.** Set the dip-switches position according the system configuration – see the section "Hardware settings" (item 4).
**4.** Switch on the battery – set the mini switch in "ON" position.

- Close the panel's box following the steps in item 3.1 in a reverse order.

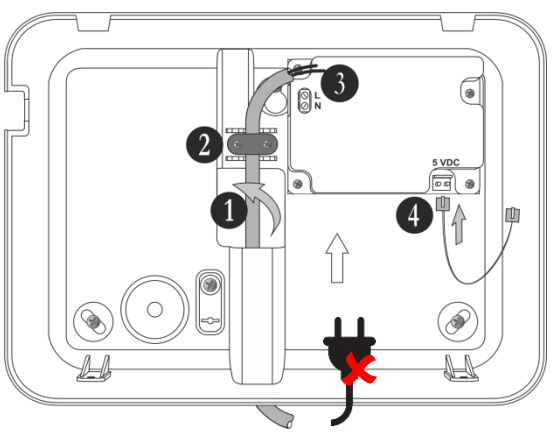
- Plug in the power adapter in the socket and proceed with peripheral device enrolment – see the section "System Configuration" (item 6).

### *3.3. Mounting and connection of BRAVO Next INTR*

BRAVO Next INTR is a wireless alarm panel with built-in power supply unit, which is factory mounted to the bottom of the box. **Attention: The electrical connections for main power supply of BRAVO Next INTR must be performed from qualified and skilled electricians only!**

**ATTENTION:** The external circuit breaker rated 10A/B characteristic, shall be disconnected during mounting. All pole main circuit breakers must be certified according to IEC 60947-2 standard!

- Prepare the panel for connecting to the mains power 230V. ***Important Note:*** *Use power supply cable with minimum cross section of 0.5mm², H05VVF, IEC 60227-1 certified!*
  **Attention: Only connections directly with building installation are acceptable! The main power cable must be connected directly to IEC60947-2 certified circuit breaker!**
  **No cable plugs are allowed!**

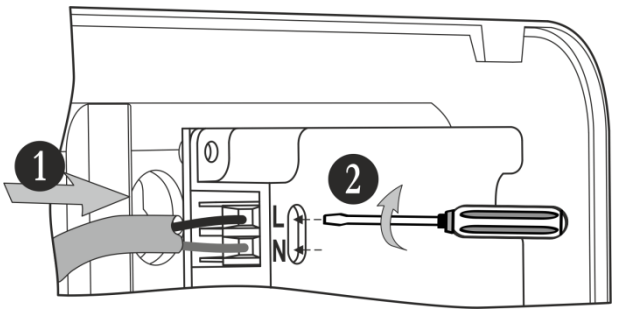



**1**. Run the mains power supply cable through the main cable channel and lead it at the internal side of the bottom.
**2**. Fix the mains power cable to the bottom using the plastic cap and screws BN82428 from the spare parts kit.
**3.** Connect the mains power cable to the "L/N" terminal as observe the polarity.
**4**. Assure that a special cable is connected to "5VDC" terminal.
**Note: You must position the cable for 5 VDC power supply as shown on the picture and to observe keeping this position when you close the BRAVO Next INTR box!**

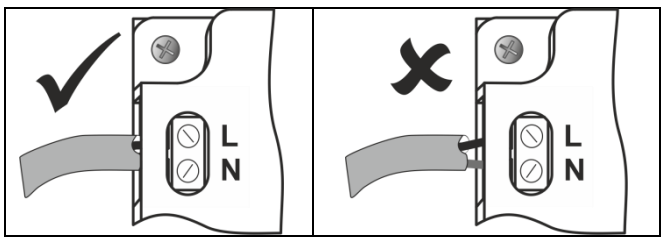
**ATTENTION:** Switch on the mains power supply (230V +10%/-15%, 50-60Hz) **ONLY AFTER** the final closing of the panel's box and switched on battery!

- The installer should strictly observe the polarity of the electrical connection when connecting the power cable to "L/N" terminal. The ends of the power cable should be clearly stripped and tighten firmly to the terminal of the power supply unit – use a plain screwdriver to tight the screws.

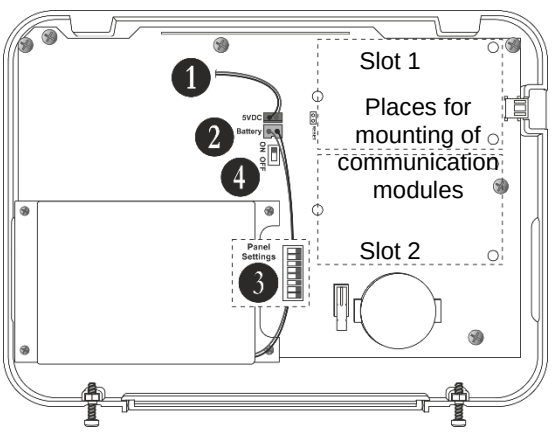
## INSTALLATION




**ATTENTION:** The wires should be placed tight in the socket terminals!




- Connect the cable on “5VDC” terminal to the same terminal on the panel’s PCB.



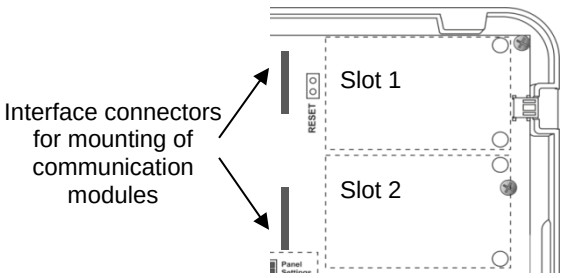

**1**. Connect the cable on “5VDC” terminal of the power supply unit to the “5VDC” terminal on the panel’s PCB.
**2.** The cable of the battery must be connected to the “Battery” terminal.
**3.** Set the dip-switches position according the system configuration – see the section “Hardware settings” (item 4).
**4.** Switch on the battery – set the mini switch in “ON” position.

- Close the panel’s box following the steps in item 3.1 in a reverse order.

- Switch on the mains power supply and proceed with peripheral device enrolment – see the section “System Configuration” (item 6).

### *3.4. Mounting of communication modules*

BRAVO Next wireless panel is designed for operation with different in functionality communication modules. The BRAVO Next panel can operate with up to two communication modules at the same time, mounted to Slot 1 and Slot 2 on the main PCB of the panel.




**ATTENTION:** The communication modules must be added to the system configuration ONLY WHEN both main power supply of the control panel and back-up battery are SWITCHED OFF.

**IMPORTANT NOTE: The communication modules must be enabled for operation initially via ProsTE programming software or BRAVO SetAPP smartphone application.**

The priority in operation (sending of messages for events via LAN, GPRS or PSTN modules, is set via mini dip-switch 6 on the panel’s PCB - see item “4. Hardware settings”.

When the “Alternative” communication type is set (position OFF of mini dip-switch 6), the priority for message distribution is as follows:

- Slot 1 – Main communication channel
- Slot 2 – Backup communication channel

## INSTALLATION

Use ProsTE software or BRAVO SetAPP smartphone application to program the modules. The type of communication modules available for operation with BRAVO Next series are:

| Module | Description |
|---|---|
| **GPRS** | **Functionalities**<br>- Sending of messages for events to Users;<br>- SMS messages for events to 4 phone numbers;<br>- Remote management – Arming and disarming, zones bypass/ de-bypass, Reviewing the memory log, programming of panel parameters.<br>**Programming**<br>ProsTE software, BRAVO SetAPP, Ajax SP<br>**Monitoring and control**<br>Home ProTTEct, Ajax SP |
| **LAN** | **Functionalities**<br>- Sending of messages for events to Users;<br>- Remote management – Arming and disarming, zones bypass/ de-bypass, Reviewing the memory log, programming of panel parameters.<br>**Programming**<br>ProsTE software, BRAVO SetAPP, Ajax SP<br>**Monitoring and control**<br>Home ProTTEct, Ajax SP |
| **PSTN** | **Functionalities**<br>- Sending of messages for events to 4 phone numbers;<br>- Choosing of communication protocol SIA, CID or User.<br>**Programming**<br>ProsTE software, BRAVO SetAPP, Ajax SP |
| **PSTN VD** | - Sending of messages for events to 4 phone numbers with voice messaging;<br>- Remote control of system (arm/disarm) over PSTN with voice guiding.<br>**Programming**<br>ProsTE software, BRAVO SetAPP, Ajax SP – "Voice Dialer" protocol set |
| **MIO** | - 4 inputs for wired zone connection.<br>- 2 operation modes for the outputs, according the application:<br>***- MIO Mode.*** Sending of messages for events via transmitter to a monitoring station; connecting of outdoor wired siren with external power supply.<br>***- PGM Mode.*** Remote control of home automation devices using the PGM outputs of the module.<br>**Programming**<br>ProsTE software, BRAVO SetAPP, Ajax SP<br>**Monitoring and control**<br>Home ProTTEct, Ajax SP |

### *3.4.1. BRAVO TTE GPRS 2G/4G Modules*

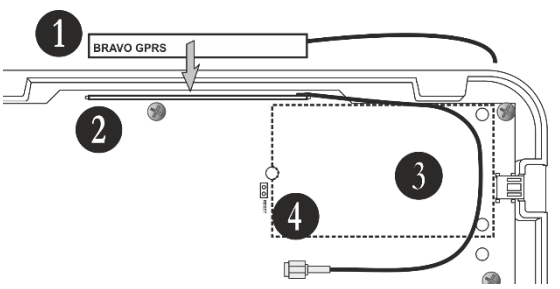
BRAVO TTE GPRS is a communication module available in versions for operation with 2G and 4G networks. It is designed for built-in installation on slot in BRAVO Next panels hardware configuration.

**ATTENTION:**
**For BRAVO TTE GPRS 2G (up to HW ver. 3.1x) the used SIM card must support operation with 2G networks.**
**For BRAVO TTE GPRS 4G (HW ver. 1.1x and above) the used SIM card must support operation with 4G networks.**

**BRAVO TTE GPRS 2G/4G module software revision SW 9.4.3 and higher, supports operation with SIM cards with roaming plan and automatic switching between mobile operators (cellular-networks) in different countries. During operation in roaming, the SMS functionality is disabled!**

**Mounting**

**1.** Remove the cover of the panel – see item 3.1. Switch off the main and backup power supply. Mount the antenna in the opening of the main panel's PCB (1, 2), then run the antenna cable along the support pins on the PCB (3). Mount the BRAVO TTE GPRS 2G/4G module **as the antenna cable must go under the PCB**. Then fix the PCB with screws to the main panel's PCB. Connect the antenna cable to the module's connector.

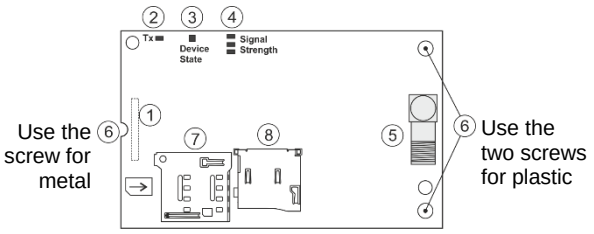



**2. Disable the PIN check option of the SIM card!** Place the SIM card into the SIM holder.
**3.** Switch on the main and backup power supply and close the cover of the box.
**4.** Use the ProsTE software or BRAVO SetAPP smartphone application ***to enable the module for operation and to set additional parameters if needed.***

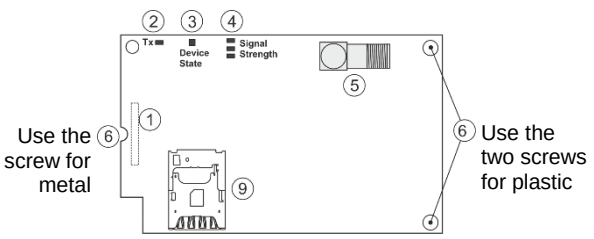
# INSTALLATION

**Description of the PCB elements**
BRAVO TTE GPRS 2G and 4G versions have different hardware configuration of the common elements. The PCBs are described below in details.

**BRAVO TTE GPRS 2G**




**BRAVO TTE GPRS 4G**




**1** - An interface connector for coupling with the panel's PCB (on the back side of the module PCB).
**2** - Tx LED - Blinks at transmitting signals for events. Lights on permanently for a lost connection with the server.
**3** - LED indication for the module status:

| Color | Description |
|---|---|
| Red (light on) | Problem with the SIM card; problem with the GPRS channel; no communication with server. |
| Orange (blinking) | The module is sending messages via back-up channel. |
| Green (blinking) | The module is in normal operation mode (the connection with the server is stable and the transmitting of messages is successful). |

**4** - LEDs for radio signal strength:

| LEDs | ☐☐☐ | ■☐☐ | ■■☐ | ■■■ |
|---|---|---|---|---|
| Signal | No | Low | Good | Very good |

**5** - Antenna connector.
**6** - Mounting holes.
**7** - Holder for micro SIM card.
**8** - Holder for micro SD card* with recorded voice messages.
**9** - Combined holder for micro SIM and micro SD card* with corded voice messages.

** The SD card is factory installed in configurations of modules with option for voice guiding - "VG" extension:*
*- BRAVO TTE GPRS 2G VG*
*- BRAVO TTE GPRS 4G VG*

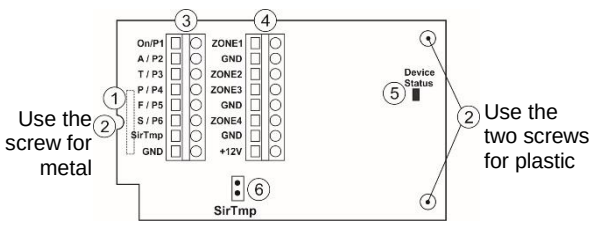
### *3.4.2. BRAVO MIO Module*

BRAVO MIO is a module with inputs for wired devices and outputs suitable for realizing different home automation or security applications.

***Note:*** *The operation of the wired inputs and the PGM outputs of BRAVO MIO module is always active – it is not required to enable the Slot1/2, where the module is mounted. The enabling of Slot1/2 is required just in case of connecting a TP2000 transmitter.*

**Mounting**
1. Remove the cover of the panel – see item 3.1. Switch off the main and backup power supply.
Mount BRAVO MIO module to Slot 1 or Slot 2 on the panel's PCB.
2. Fix the module with screws to the panel's PCB.
3. Connect the inputs and outputs according the application of the module.
4. Switch on the main and backup power supply and close the cover of the box.

**Description of the PCB elements**




**1** - An interface connector for coupling with the panel's PCB (on the back side of the module PCB).
**2** - Mounting holes.
**3** - 45 degree terminal blocks for connecting outputs. The functionality of the outputs can be set in one of the following operation modes using ProsTE software or BRAVO SetAPP smartphone application:
- MIO – Transmitting signals to radio transmitter or connecting of wired siren (see Examples 1 and 2).
- PGM – Programmable outputs OC, 100mA (see Example 3).

| Terminal | MIO Mode | PGM Mode |
|---|---|---|
| On / P1 | Event "Arm / Disarm". | OC, 100mA |
| A / P2 | Event "Burglary Alarm". | OC, 100mA |
| T / P3 | Event "Tamper / Lost device". | OC, 100mA |
| P / P4 | Event "Panic Alarm". | OC, 100mA |
| F / P5 | Event "Fire Alarm". | OC, 100mA |
| S / P6 | Event "Siren" – repeats the alarm cycle of a connected wired siren (the silent alarms do not affect at this output). | OC, 100mA |
| SirTmp | Jumper for disabling the signals from a wired siren connected to the module. | - |
| GND | Common ground. | Common ground. |

## INSTALLATION

**4** - 45 degree terminal blocks for connecting wired zones/devices

Every wired zone input must be attached to a free device (zone) number in BRAVO Next panel.

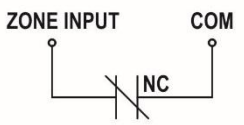
**ATTENTION: The type of the connection (schematics 1-5) and the device number are set via ProsTE software or BRAVO SetAPP smartphone application.**

The type of wired zones/devices is set in the same way as for the wireless ones – it depends on the configuration of the hardware DIP-switches, see items 4.1 and 4.2.

| Terminal | Description |
|---|---|
| ZONE 1 | Input for wired Zone 1. |
| GND | Common ground. |
| ZONE 2 | Input for wired Zone 2. |
| ZONE 3 | Input for wired Zone 3. |
| GND | Common ground. |
| ZONE 4 | Input for wired Zone 4. |
| GND | Common ground. |
| +12V | Power supply 12V DC for the wired zones. |

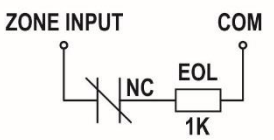
The connecting of the wired zones/devices is according an operation diagram NO/NC type with or without tamper recognition – see the schematics 1-5.
***LEGEND:** "↙" means "lower than" value; "↗"means "higher than" value.*

❶ N.C. WITHOUT EOL



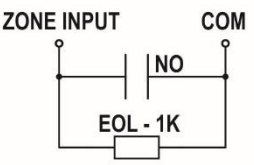

| Value | Description |
|---|---|
| ↙ 1.5 kΩ | The zone is closed |
| 1.5 kΩ ↗ | The zone is open |

❷ N.C. WITH EOL



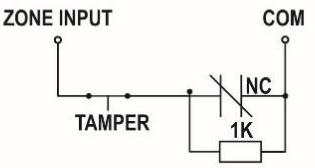

| Value | Description |
|---|---|
| ↙ 0.75 kΩ | The zone is open |
| 0.75 - 1.5 kΩ | The zone is closed |
| 1.5 kΩ ↗ | The zone is open |

❸ N.O. WITH EOL



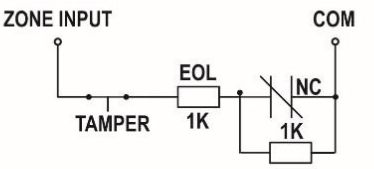

| Value | Description |
|---|---|
| ↙ 0.75 kΩ | The zone is open |
| 0.75 - 1.5 kΩ | The zone is closed |
| 1.5 kΩ ↗ | The zone is open |

❹ N.C. WITHOUT EOL, WITH TAMPER AND TAMPER RECOGNITION




| Value | Description |
|---|---|
| ↙ 0.75 kΩ | The zone is closed |
| 0.75 - 5.6 kΩ | The zone is open |
| 5.6 kΩ ↗ | Tamper break-off |

❺ N.C. WITH EOL, WITH TAMPER AND WIRE FAULT RECOGNITION




| Value | Description |
|---|---|
| ↙ 0.75 kΩ | Tamper short-circuit |
| 0.75 - 1.5 kΩ | The zone is closed |
| 1.5 - 5.6 kΩ | The zone is open |
| 5.6 kΩ ↗ | Tamper break-off |

The other PCB elements of the BRAVO MIO module are:

**5** - LED indication for the module status:

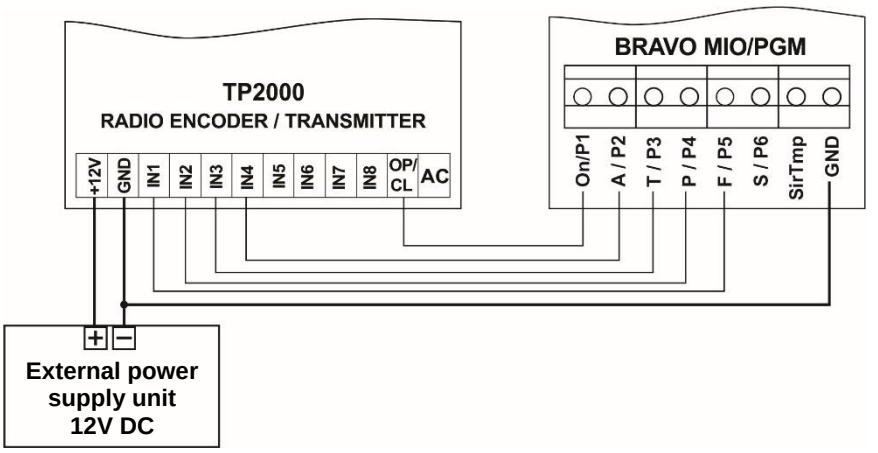
| Color | Description |
|---|---|
| Yellow | Power-up initialization mode or resetting. |
| Red | No communication with the panel. |
| Green | The module is in normal operation mode. |

**6** - Jumper SirTmp (see the connection diagram between BRAVO MIO and wired siren in *Application Example 2*).

## INSTALLATION

### *Application Example 1 (MIO Mode)*

*Connection between BRAVO MIO and radio transmitter TP2000 for sending messages for events to monitoring station.*



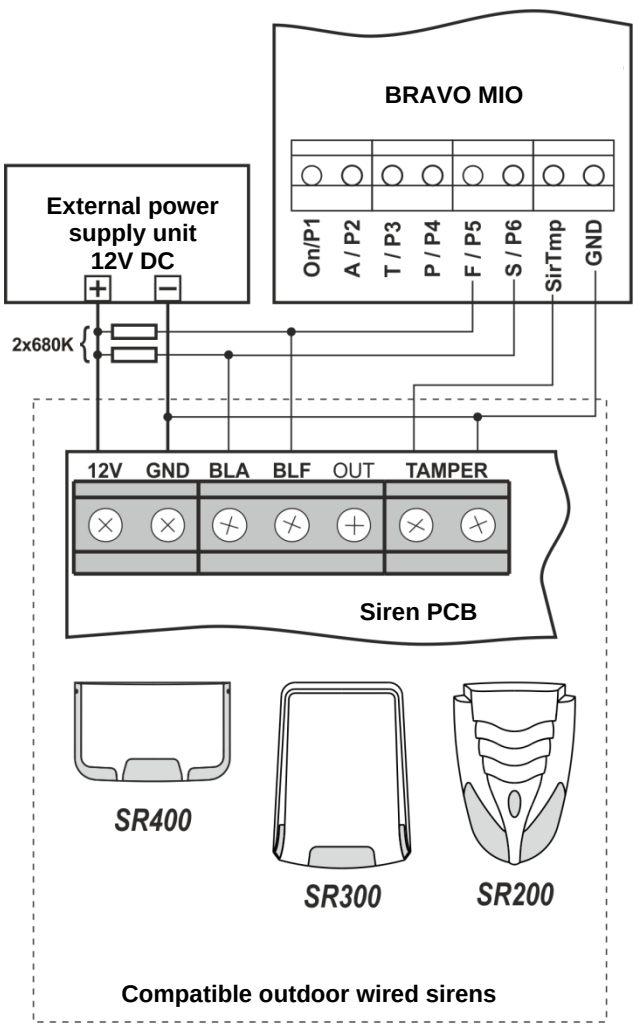

**ATTENTION:**

When the BRAVO MIO module is mounted on Slot 1 and "Alternative" communication type is set, the panel will send messages only through the main channel and never through the backup channel, regardless of that whether the transmitted signal is received from the monitoring station or not.

When the BRAVO MIO module is mounted on Slot 2 and "Alternative" communication type is set, the panel will send messages first through the main channel and in case of failure – through the backup channel.

### *Application Example 2 (MIO Mode)*

*Connection diagram between BRAVO MIO and wired outdoor siren.*




***Note:***
**The jumper *SirTmp* must be removed** in case of connection of wired siren to BRAVO MIO module, for announcing of the following technical troubles:
- Open tamper of the wired siren;
- Broken line between wired siren and BRAVO MIO module.

**When the jumper *SirTmp* is set**, the BRAVO Next panel will not follow the status of the connected wired siren.

**Indication of BRAVO Next panel in case of connection of wired siren to BRAVO MIO**

One wired siren can be connected to BRAVO MIO module - in programming mode and selected "Sounder Group" the connected wired siren is shown as device enrolled to position 16*.

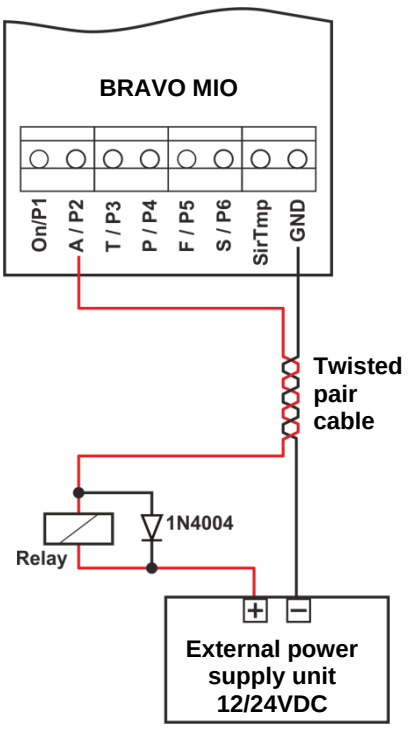
**** Note:** The indication will be active directly after the connection of BRAVO MIO module to the panel's PCB and set MIO operation mode.*

For correct operation of the siren, it is obligatory to connect 2x680K resistors as shown on the connection diagram.
The wired siren can be bypassed like all other wireless devices in the system.
In case of technical trouble with the wired siren (tamper signal or broken line between the siren and BRAVO MIO module) the indication in Technical troubles review mode is:

## INSTALLATION

### *Application Example 3 (PGM Mode)*

*Use the BRAVO MIO module for controlling a relay module via the PGM outputs.*




You can set an individual name for every one PGM output via ProsTE software or BRAVO SetAPP smartphone application. The PGM outputs can be controlled via user mobile smartphone application Home ProTTEct or Ajax SP.

**ATTENTION: When the BRAVO MIO module is set to operate in PGM mode, Slot 1 and Slot 2 of the panel will operate together, in Communication type "All" – see item 4.1.**

### *3.4.3. BRAVO LAN Module*

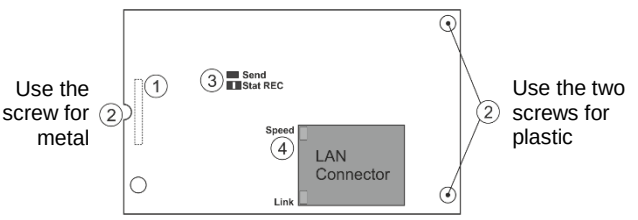
BRAVO LAN is a communication module for remote control and management of BRAVO Next panels via Ethernet LAN network. Using the LAN module is possible also remote management of the BRAVO Next panel via Home ProTTEct smartphone application and Ajax Web.

***Attention:*** *It is strongly recommended to equip your network router with a backup or UPS external power supply, so the LAN module to be enable to send notification messages for events even in case of main power supply failure at the security site.*

**Mounting**

1. Remove the cover of the panel – see item 3.1. Switch off the main and backup power supply.
Mount BRAVO LAN module to Slot 1 or Slot 2 on the panel's PCB.
2. Fix the module with screws to the panel's PCB.
3. Connect the LAN network cable to the connector.
4. Switch on the main and backup power supply and close the cover of the box.
5. Use the ProsTE software or BRAVO SetAPP smartphone application to enable the module for operation and to set additional parameters if needed.

**Description of BRAVO LAN elements**




**1** - An interface connector for coupling with the panel's PCB (on the back side of the module PCB).
**2** - Mounting holes.
**3** - LED indication for the module status:

| LED | Description |
|---|---|
| **Send** (yellow) | Blinking at sending messages for events to Ajax SP server. |
| **Stat Rec** (red/green) | Lights on in **red** when the connection with Ajax SP server is lost.<br>Lights on in **green** when the connection with Ajax SP server is stable.<br>Blinking **red-green** at sending messages for events to Ajax SP server, together with Send yellow LED. |

**4** – LAN network connector with status LED indication:

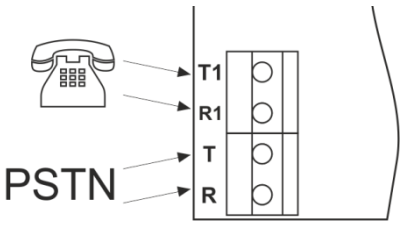
| LED | Description |
|---|---|
| **Speed** (green) | LED LAN Action. The LED is blinking when there is activity on the link; otherwise, the LED is off. |
| **Link** (yellow) | LED LAN Link. The LED is on when there is a link connection; otherwise, the LED is off. |

## INSTALLATION

### *3.4.4. BRAVO PSTN and PSTN VD Modules*

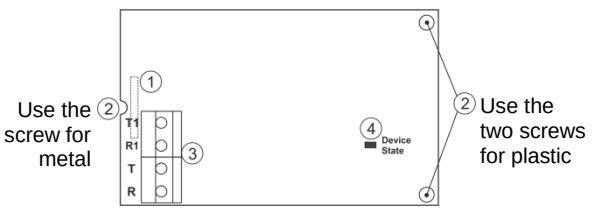
**Mounting**

1. Remove the cover of the panel – see item 3.1. Switch off the main and backup power supply.
Mount BRAVO PSTN (PSTN VD) module to Slot 1 or Slot 2 on the panel's PCB.
2. Fix the module with screws to the panel's PCB.
3. Connect the telephone line to the terminals T and R, and the telephone device to terminals T1 and R1. There are no requirements for the polarity of the connection.




4. Switch on the main and backup power supply and close the cover of the box.
5. Use the ProsTE software or BRAVO SetAPP smartphone application to enable the module for operation and to set additional parameters if needed.
6. Perform communicator test as described in item 9.7.

**Description of BRAVO PSTN elements**

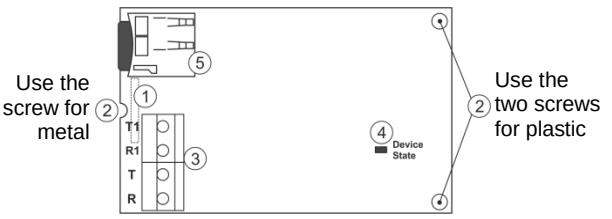



**1** - An interface connector for coupling with the panel's PCB (on the back side of the module PCB).
**2** - Mounting holes.
**3** - Terminals for connecting of telephone line and device.

**4** - LED indication for the module status:

| Color | Description |
|---|---|
| Red | The telephone line is missing. The module is unable to send message for an event. |
| Green | The module is in normal operation mode (the connection with the telephone line is stable and the transmitting of messages is successful). |

**Description of BRAVO PSTN VD elements**




**1** - An interface connector for coupling with the panel's PCB (on the back side of the module PCB).
**2** - Mounting holes.
**3** - Terminals for connecting of telephone line and device.

**4** - LED indication for the module status:

| Color | Description |
|---|---|
| Red | The telephone line is missing. The module is unable to send message for an event. |
| Green | The module is in normal operation mode (the connection with the telephone line is stable and the transmitting of messages is successful). |

**5** - Holder for a micro SD card* with recorded voice messages for events.

** The SD card is factory installed in configuration of module with option for voice dialing - "VD" extension - BRAVO PSTN VD.*

## 4. Hardware Settings

### *4.1. Dip-switches*

Use the dip-switches to set some additional settings according the configuration and operation of the system.

Every dip-switch has two positions ON and OFF used to set certain functionality.
Use a small suitable tool to set the position of a dip-switch.

**ATTENTION:** The numbers of the dip-switches are described according their location on the panel's PCB.

The dip-switches order and their functionality are described as:

| No | Description | Position | |
|---|---|---|---|
| | | OFF | ON |
| 8 | Power RF (Increased sensitivity of the control panel) | ✘ | ✓ |
| 7 | Not used | - | - |
| 6 | Communication type | Altern. | All |
| 5 | Zone types (see item 4.2) | Config. 1 | Config. 2 |
| 4 | Sound signalization on ARM/ DISARM | ✘ | ✓ |
| 3 | Clear the bypassed zones on DISARM | ✘ | ✓ |
| 2 | LED Indication – panel | ✓ | ✘* |
| 1 | Not used | - | - |

✓ - Enabled; ✘ - Disabled

** Note: When the dip-switch is set to ON position, the LED indication of the panel is disabled when the system is armed. The status LED will blink during the entry-exit time running. When the system is disarmed the LED indication of the panel is active.*

All dip-switches are set in OFF position from the manufacturer after the production.

**To change the position of a dip-switch, open the front cover and switch off the main and backup power supply of the panel.** Use a small suitable tool to switch over the position of a dip-switch. Switch the main and backup power supplies and close the panel.

**The setting of the dip-switches does not change after full hardware reset of the panel.**
**The current position of the hardware dip-switches can be checked via the software applications ProsTE and Ajax SP.**

### *4.2. Type configurations of the zones*

The installer can choose between two basic configurations for the zone types with setting the position of dip-switch 5.

The zone type description is as follow:

- **Entry-Exit** – Provides time to arm and disarm the site. After arming, the detector, which was triggered off in this zone, will not sound an alarm until the programmed EXIT TIME expires.
  When the entry-exit zone is opened in armed mode an ENTRY TIME starts running during which the user must disarm the system. When the entry time expires and the system is not disarmed, the sounders will alarm for burglary not authorized entry.
- **Follow** – An alarm zone which is active only when the site is armed. The zone operates instantaneously. Activating the zone during entry or exit time does not cause an alarm event.
- **Instant -** An alarm zone which is active only when the site is armed. The zone operates instantaneously. Activating the zone during entry time causes an alarm event, as during the first 30 sec only the built-in sounder (in the panel) will be active and if the system has not been disarmed during this period the outdoor sounder will be activated too, and a message to a monitoring center will be sent.
- **Fire –** 24-hour fire zone. All wireless fire detectors are automatically attached to this type of zone during the enrolment. The zone operates instantaneously when a fire detector is activated as the sounders are activated and FIRE alarm message is sent via the available communication channels.
- **24-hour security zone.** All wireless flood detectors are automatically attached to this type of zone during the enrolment. The zone operates instantaneously when a flood detector is activated, as FLOOD alarm message is sent via the available communication channels but the sounders are not activated.

The description of the zone configurations:

| Zone No | Configuration | | Type of the Detector* |
|---|---|---|---|
| | 1 | 2 | |
| 1 | Entry-Exit | Instant | MC or PIR |
| 2 | Entry-Exit | Instant | MC |
| | Follow | | PIR |
| 3-16 | Instant, fire or 24-hour security zone | Instant, fire or 24-hour security zone | Every type wireless PAX detector |

** Up to 1 detector can be enrolled to a zone. The type of the detectors mentioned in the table above are suitable for realization of Configuration 1.*

## HARDWARE SETTINGS

### *4.3. Hardware reset*

After hardware reset of the panel all default settings are restored, the enrolled devices and the memory log events are deleted.

To perform hardware reset:

**1**. Switch off the main and the back-up power supply of the panel.
**2.** Set a jumper on the RESET terminals.
**3.** Switch on the main and the back-up power supply of the panel – the zone LEDs (1-16) are blinking in sequence in different colors – signalization “chasing LEDs” type.
**4.** Remove the jumper from the RESET terminals – the panel goes to normal operation mode, as only the status LED is lighting on in green.

***Note:*** *You can skip the chasing LEDs signalization test as directly remove the jumper from RESET terminals after switching on the mains and back-up power supply.*

After the initial start-up and every resetting, the panel goes through initialization procedure – the status LED starts blinking for 10-15 seconds until the system is established in normal operation mode.

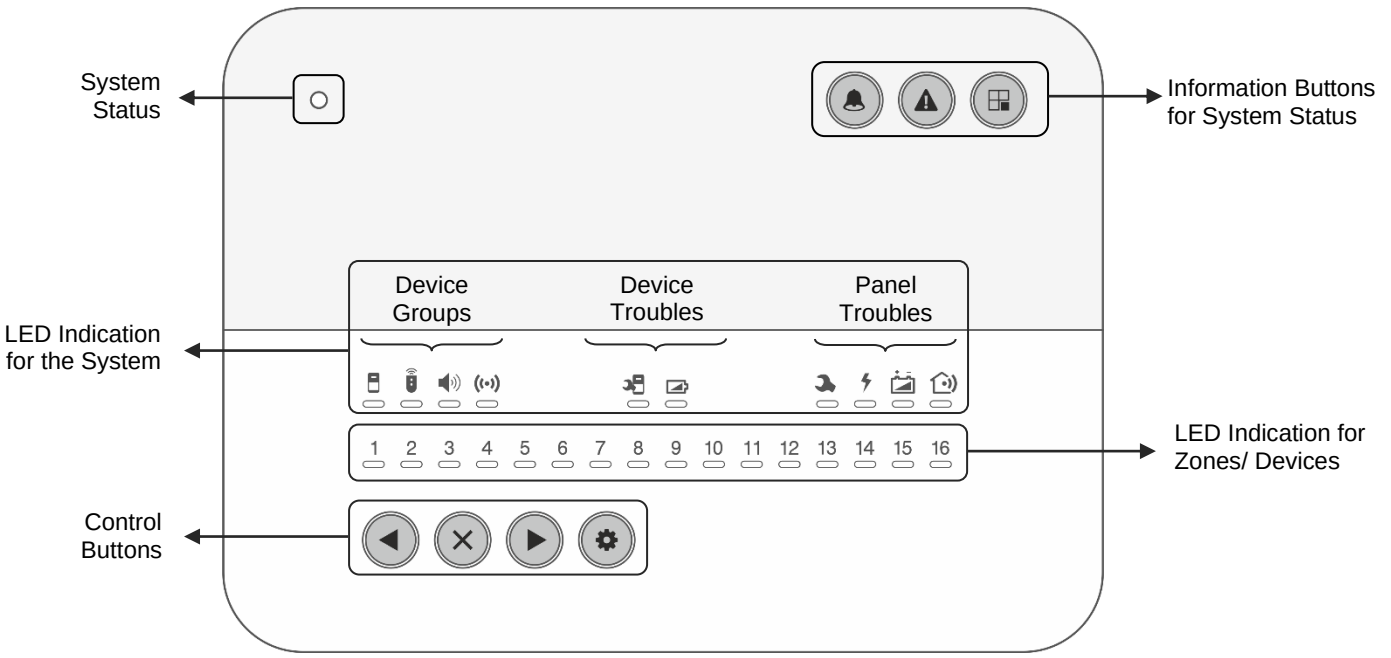
### *4.4. Sound signalization from the panel*

| Signalization | Description |
|---|---|
| Button* | Single short beep indicating the pressing of a key. |
| Confirmation | Two long sound signals, indicating the system confirmation for executed operation. |
| Cancelation | A single long beep, indicating system incorrectly executed operation. |
| Entry time* | Continuous beep, indicating intrusion into an entrance zone. |
| Exit time* | Short beeps, indicating the system is armed and the user is required to leave the entrance zone. Ten seconds before the exit time is over beep frequency increases. |
| Technical trouble* | Two short beeps at every 20 sec, indicating a technical trouble. To stop the signalization - press the ATTENTION button. |
| Chime* | Short beeps with subsequently increasing period, indicating intrusion into a zone with an activated chime option when the system is disarmed. |
| Arming | The dip-switch 4 is set in ON position. One short sound signal indicating system ARMING. |
| Disarming | The dip-switch 4 is set in ON position. Two short sound signals indicating system DISARMING. Four short sound signals indicating system DISARMING when there is memory for alarm event. |

** Note: The signalization can be disabled via specialized ProsTE programming software or BRAVO SetAPP smartphone application.*

## BUTTONS AND INDICATION

## 5. Description of the Front Panel




**BRAVO Next Panel – Front view, open cover.**

### *5.1. Buttons*

| System Control | |
|---|---|
| | **Button Programming**<br>- Entry/ Exit for "Device enrolment" mode – see item 6.1;<br>- Scrolling over the device groups in "Device enrolment" mode;<br>- Entering in a special mode for disarming the system from User via the panel's buttons – see item 8.3.3.<br><br>**LED Indication**<br>After entering in the "Device enrolment" mode lights on in red. |
| | **Button Cancel**<br>- Deleting a device in "Device enrolment" mode - see item 7.6.<br>- Confirmation of digits in a special mode for disarming the system from User via the panel's buttons - see item 8.3.3. |
| Back<br><br>Forward | **Arrow Buttons**<br>- Scrolling over zone and position numbers in "Device enrolment" mode, for reviewing the bypassed devices in the system, or reviewing the alarms in zones;<br>- Selecting digits in a special mode for disarming the system from User via the panel's buttons - see item 8.3.3. |

| System Status | |
|---|---|
| | **Button Alarm Review**<br>- Entry/ Exit for "Reviewing Alarm Events" mode - see item 9.2.<br><br>**LED Indication**<br>In case of alarm event in the system lights on in red. After entering the "Reviewing Alarm Events" mode, the button is blinking. |
| | **Button Attention**<br>- Entry/ Exit for "Reviewing Troubles" mode - see item 9.1.<br><br>**LED Indication**<br>In case of a technical trouble in the system lights on in yellow. After entering the "Reviewing Troubles" mode, the button is blinking. |
| | **Button Bypass**<br>- Entry/ Exit for "Bypassing zones/ devices" mode - see item 7.5.<br><br>**LED Indication**<br>Lights on in yellow if there are bypassed zones/ devices in the system. After entering the "Reviewing bypassed Zones/ Devices" mode, the button is blinking. |

# BUTTONS AND INDICATION

## *5.2. LED Indication*

| System Status | |
|---|---|
| **Information LED for the current status of the system:** | |
| Green | - Normal operation mode.<br>- The system is ready for arming.<br>- Blinking during searching of a free channel. |
| Red | - The system is armed.<br>- Blinking during an alarm cycle. |
| Off | - The system is not ready for arming - there are open instant type zones.<br>- Programming mode entry.<br>- No main and back-up power supply.<br>- The jumper RESET is not removed.<br>- Technical problem with the panel or with a device. |

| Indicators for Device Groups | |
|---|---|
| | **Detectors**<br>To the group can be enrolled up to 16 devices from PAX PIR, MC, FD or FL type – **only 1 detector to each zone**.<br><br>**LED Indication**<br>Lights on in red in case of activated detector together with the corresponding zone number. In "Device enrolment" mode lights on permanently as indication for a selected group. |
| | **Remote control**<br>To the group can be enrolled up to 8 PAX key fobs (RC and/or Panic type) or up to 7 PAX key fobs and 1 PAX KBD wireless keyboard.<br><br>**Attention: The enrolled to positions 1 and 2 key fobs become MANAGER and are obligatory for entry in "Device enrolment" mode –** see item 6.3.<br><br>**LED Indication**<br>In "Device enrolment" mode lights on permanently as indication for a selected group. |
| | **Sounders**<br>To the group can be enrolled 2 wireless indoor or outdoor PAX sirens.<br><br>**LED Indication**<br>In "Device enrolment" mode lights on permanently as indication for a selected group. |

| Indicator for Walk Test | |
|---|---|
| | **Walk Test Mode**<br>Indication for entering in walk test mode – see item 7.4 for details. |

| Indicators for Device Troubles | |
|---|---|
| | **Technical trouble**<br>Indication for:<br>- Activated tamper switch of a device;<br>- Lost device. |
| | **Battery low charge**<br>Indication for low battery charge of a device. |
| **LED Indication**<br>In "Reviewing Troubles" mode the respective LED indicator lights on in yellow and the number of the first device with trouble is blinking and the indicator for its type is lighting on. If there are more devices with troubles, their numbers are lighting in yellow. Reviewing of their type is done by the arrows. | |

| Indicators for Panel Troubles | |
|---|---|
| | **Tamper**<br>Indication for activated tamper – the panel's box is open or the tamper plate on the bottom is broken. |
| | **Mains power supply 230V lost**<br>The sound signalization for mains power supply lost can be immediate or delayed for programmed time interval.<br>By default, the signalization is immediate. The time delay for the signalization can be programmed via specialized ProsTE software or BRAVO SetAPP smartphone application. |
| | **Battery low charge**<br>Indication for low charge, missing or switched off battery of the panel. |
| | **Trouble with the communication channel**<br>Indication for trouble in the connection with any of the used communication modules. |
| **LED Indication**<br>In "Reviewing Troubles" mode the respective LED indicator lights on in yellow. | |

**Indicators for Zones / Devices**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

**LED Indication**

| Color | Mode | |
|---|---|---|
| | Enrolment | Test |
| Green | Free position | Successful test |
| Red | Enrolled device | Unsuccessful test |
| Yellow | Bypassed device | Open zone |
| Off | The position is not used for the current type of the device | No device enrolled to the position |

## SYSTEM CONFIGURATION

### *6. Device Enrolment*

The enrolment is a process of adding peripheral devices to the system configuration.
The LED indication has the following meaning:

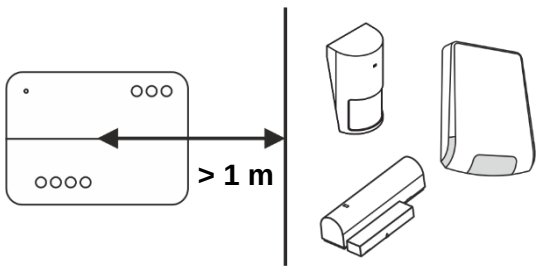
Device Groups


Position of a device (zone number)

A device group is selected, when the LED indicator under the respective icon lights on permanently in red. The exit from the "Device enrolment" mode is automatic after 10 minutes if there is no activity with the panel (button pressed). Exit from the "Device enrolment" mode can be done also with pressing of button "Programming" several times.

**ATTENTION: Up to 1 detector can be enrolled to a zone.**

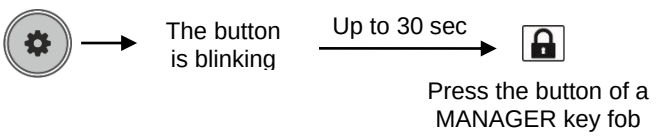
The minimum distance between the panel and enrolled peripheral devices must be 1 meter (in increased sensitivity mode - 2 meters) to guarantee the proper operation of the system, including in test mode.




#### *6.1. Access to the Device Enrolment mode*

- In case of a new system, or after realized hardware reset, or NO MANAGER key fobs are enrolled to the system configuration, to enter in "Device enrolment" mode press button:

- In case, there are MANAGER key fobs already enrolled to the system configuration (position 1 and/or 2), to enter in "Device enrolment" mode press in sequence:




- In case, there is enrolled PAX KBD wireless control keyboard, you can enter the programming menus using engineer access code.

#### *6.2. General steps for enrolling a detector*

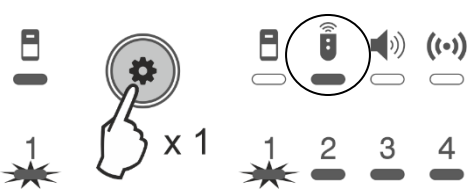
- Prepare the detector for enrolling – remove the cover to access the detector's PCB and the battery.
- Enter in "Device enrolment" mode.
- The system enters in the menu for detectors enrolment. The LED indicator under the icon is lighting on and the Zone 1 is blinking:


The numbers of the free zones (with no detectors enrolled) are lighting in green, and those with already enrolled devices – in red. The currently selected zone number is blinking.

- Use the buttons with arrows to select a number of a free zone – the zone number is blinking in green.
- Remove the protection folio from the battery – the LED(s) of the detector is lighting in sequence in red and green.
- If the device is brand new, the enrolment procedure starts automatically – the LED(s) is blinking in red and after a short time interval – in green. The panel confirms the successful enrolment with a sound signal, and the selected zone number is blinking in red. If the device is already used in other system, reset it first, and then press the ENROLL button on the detector's PCB.
- Go to the place for installation of the detector and make a radio test for signal strength – see item 7.1.
- Close the cover of the detector and check it for proper operation – when the detector is activated (zone open) the respective zone number on the panel lights on in red together with the indicator for type of the device.

#### *6.3. General steps for enrolling remote controls – PAX RC, PAX Panic and PAX KBD*

- Enter in "Device enrolment" mode.
- The system enters in the menu for detectors enrolment. Press the "Programming" button once again to move to the menu for remote controls. The LED indicator under the icon is lighting on and the position 1 is blinking:




The numbers of the free positions (with no key fobs or keyboard enrolled) are lighting in green, and those with already enrolled remote controls – in red. The currently selected position number is blinking.

## SYSTEM CONFIGURATION

**ATTENTION:** The enrolled to positions 1 and 2 remote controls are called MANAGER and are used for entry in “Device enrolment” mode.

- Use the buttons with arrows to select a number of a free position – the number is blinking in green.
- For brand new PAX RC, PAX Panic and PAX KBD the enrolment starts automatically after pulling out the plastic strip protecting the activation of the battery - LED blinks one time in red and after a short time interval confirms the enrolment with three green blinks. The panel confirms the successful enrolment with a sound signal, and the selected position number is blinking in red. If the key fob is already used in other system, reset it first, and then press a random button to initialize enrolment.
- Close the back cover of the device; tighten the screw on the back cover of the remote key fob.
- After exit from the “Device enrolment” mode the key fob/keyboard is ready for operation.

### *6.4. General steps for enrolling a siren*

- Prepare the siren for enrolment – remove the covers to access the PCB and the battery terminals.
- Enter in “Device enrolment” mode.
- The system enters in the menu for detectors enrolment. Press the “Programming” button twice to move to the menu for siren enrolment. The LED indicator under the icon is lighting on and the position 1 is blinking:


The PAX panel supports operation with up to two sirens, which can be enrolled at positions 1 and 2.

- For a brand-new siren, the enrolment starts automatically after switching on the battery – the LED is blinking in red and after a short time interval – in green. The panel confirms the successful enrolment with a sound signal, and the position number is blinking in red. If the siren is already used in other system, reset it first, and then press the ENROLL button on the control PCB.
- Go to the place for installation of the siren and make a radio test for signal strength – see item 7.1.
- Close the covers of the siren and test its operation simulating an alarm event.
- By default, the alarm cycle of the siren is set to 1 minute. The installer can program other duration of the alarm cycle (up to 3 minutes) via ProsTE software or BRAVO SetAPP smartphone application.

**You can find a detail information about installation and technical characteristics of every PAX wireless device in its individual operation manual.**

**Tips & Tricks...**

- Leave the enrolment of the used key fobs at the end - in this way the entry in the “Device enrolment” mode will be easier during the installation of the other devices.
- You can scroll over the device groups also using the arrow buttons - when reaching the last zone / position the panel automatically moves to the next device group.
- In “Device enrolment” mode the zones / positions of the bypassed devices are lighting in yellow.
- Use a double-sided mounting tape for fixing the detectors during the initial installation - it is possible to change the mounting place later in order to obtain a better strength of the radio signal.
- After successful enrolment to the panel, write down the zone number on the sticker and place it on the inner side of the detector’s enclosure.
- Fill in the Object card for the protected site given at item 11.
- Use ProsTE software or BRAVO SetAPP smartphone application to set the operation of the enrolled devices.

## *7. Test of Devices*

### *7.1. Radio test of devices*

The radio test should be performed in order to check the signal strength on the site and the quality of the communication between the control panel and the wireless PAX series devices.

The radio test can be performed directly after the enrolment of the device and after that during the maintenance of the system.

**ATTENTION:** The radio test must be performed at 1 or 2 meters distance from the control panel. Testing the device at close distance may not be correct and to fail.

To perform a radio test of a device:

- Remove the cover of the device to access the PCB.
- Press the ENROLL button - the LED(s) will blink single in green. Up to 30 seconds the device will inform for signal coverage with a new indication with the following meaning:
  - 3 blinks in green - the signal coverage is good and there is a stable communication between the device and the panel.
  - 3 blinks in red - no signal coverage and communication between the device and the panel; if you are too close to the panel (up to 1 meter), increase the distance between the panel and the device and perform the test again.
  - 3 blinks in yellow – there is a signal coverage, but the communication between the device and the panel is unstable. In this case it is recommended to change the place of installation and to perform a new radio test.

## SYSTEM CONFIGURATION

**Tips & Tricks...**

- Perform the radio test just after the enrolment of the device and at the place of installation, as in that way you can choose the place with the best signal coverage.

### *7.2. Remote key fobs operation test*

Perform this test to check the communication between the panel and the remote control key fobs, and also the position to which every one of them is enrolled.

To perform the operation test:

- Enter in “Device enrolment” mode.
- The system enters in the menu for detectors enrolment.
- To perform the test, press a random button of the key fob.
- The panel automatically enters in the remote controls’ menu and the number of the position to which the key fob is enrolled is blinking.

### *7.3. Siren operation test*

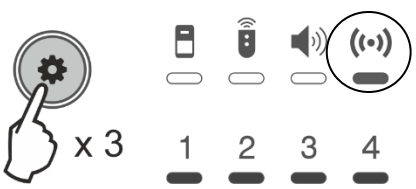
The test can be performed, if an option “Siren check” is set to a programmable button of a key fob. When this option is set and programmed to the panel via ProsTE software or BRAVO SetAPP application, with every pressing of the button of the key fob, the enrolled siren(s) will replay with 4 consecutive short sound signals.

### *7.4. Zone Walk Test*

Perform this test to check the communication between the panel and the enrolled detectors to the zones.

**To perform Zone Walk Test you must enter in programming mode first. If there are MANAGERS key fobs in the configuration (enrolled at positions 1 or 2) you must use them to enter the programming menus. You can enter in programming mode also using a PAX KBD wireless control keyboard using engineer access code.**

To perform walk test of a zone, enter in in “Device enrolment” mode and then press 3 times the “Programming” button to move to the Test Mode – the indication for Walk Test lights on in red:




- The panel enters in a walk test mode for 10 minutes. Every pressing of a random button of the MANAGER key fob starts a new time interval of 10 minutes.
- The zone numbers with enrolled detectors are lighting on in red.
- Activate a detector (open the zone) – the respective zone number is blinking in yellow, which means that the zone is open. The panel confirms the test with Chime sound signal.
- The walk test is successful if after closing of the zone, its number is lighting on in green.
- The walk test is not successful if after closing of the zone, its number is lighting on in red.

The exit from the zone walk test mode is automatic after 10 minutes, if there is no pressed button of a MANAGER key fob. The installer can exit the walk test mode at any time with pressing the “Programming” button.

### *7.5. Bypassing of Devices*

Bypassing is a special mode for disabling devices temporally from the system configuration. The panel does not follow the current status of the bypassed devices.

- **To bypass (disable) a device:**
  - Enter in “Device enrolment” mode.
  - Use arrow buttons to select a number of a device, which you want to bypass.
  - The number of the selected device on the panel is blinking in red and the detector’s LED(s) - in yellow.
  - Press the “Bypass” button.
  - The number of the selected device on the panel is blinking in yellow.
  - Press the “Programming” button several times to exit the “Device enrolment” mode.
  - The “Bypass” button is lighting on in yellow, which is an indication for bypassed devices in the system.

- **To un-bypass (enable) a device:**
  - Enter in “Device enrolment” mode.
  - The numbers of the bypassed devices are lighting in yellow.
  - Use the arrows to select the number of a bypassed device, which you want to enable – blinking in yellow.
  - Press the “Bypass” button.
  - The number of the device on the panel is blinking in red.
  - Press the button “Programming” several times to exit the “Device enrolment” mode.

- **To bypass/ un-bypass a key fob/keyboard:**
  - Enter in “Device enrolment” mode.
  - Press the button “Programming”.
  - Use arrow buttons to select a number of key fob or keyboard, which you want to bypass/ un-bypass.
  - Press the “Bypass” button.
  - Press the button “Programming” several times to exit the “Device enrolment” mode.

## SYSTEM CONFIGURATION

- **To bypass/ un-bypass a siren:**
  - Enter in "Device enrolment" mode.
  - Press twice the "Programming" button .
  - Use arrow buttons to select a number of a siren, which you want to bypass/ un-bypass.
  - Press the "Bypass" button.
  - Press the button "Programming" to exit the "Device enrolment" mode.

**Note:** If a wired siren is connected to the panel via BRAVO MIO module it is shown as enrolled siren to position 16. The wired siren can be bypassed in the same way as the wireless siren, as selecting position 16 and pressing the "Bypass" button.

### *7.6. Deleting of Devices*

The deleting is a process for complete removing of a device from the system configuration.

- To delete a detector:
  - Enter in "Device enrolment" mode.
  - Use arrow buttons to select a number of detector, which you want to delete.
  - The number of the selected device on the panel is blinking in red and detector's LED(s) – in yellow.
  - Press and hold the "Cancel" button until a confirmation sound signal is heard*.
  - The number of the zone on the panel is blinking in green.
  - Press the "Programming" button several times to exit the "Device enrolment" mode.

- To delete a remote control key fob, keyboard or siren you can do in the same way described above after accessing the respective programming menu for remote controls and sirens.

** Note: The process of a device deleting may take time up to 15 seconds if the device is missing or it had been reset.*

### *7.7. Resetting Detectors and Sirens*

The resetting of a device is restoring of its default factory settings. But the position to which the device has been enrolled to the panel stays occupied. If the occupied position is not deleted, with the next enrolment of the same device to the panel it will be attached automatically to this position.

The reset procedure for each PAX device is described in details in its individual installation manual.

**ATTENTION: Before resetting of a MANAGER key fob, it is obligatory first to delete it or bypass it from the panel!**

**Tips & Tricks...**

- The zone walk test is performed to all detectors in the system including the bypassed ones.
- Enter in zone walk test mode and start system testing from the near to control panel devices. Press a random button of the MANAGER key fob every time after a successful test to prolong the time of the test.
- If you are not familiar with the system configuration you can check the detector number (zone number), as enter in "Device enrolment" mode – the number of a selected device is blinking in red on the panel, and the device LED(s) – in yellow.
- It is recommended to remove the batteries of all bypassed, deleted and reset devices if you are planning not to use them for a long time.
- **IT IS OBLIGATORY TO REMOVE THE BATTERIES OF ALL DEVICES if the BRAVO Next system will not be in use for a long time and the main and back-up power supplies of the panel are switched off.**

### *7.8. Supported Software*

**Home ProTTEct** - Management and control of BRAVO Next panel, including Arm/Disarm, Bypassing, Log Reviewing, Notifications,etc.

**IMPORTANT:** To arm/ disarm and to check the status of your BRAVO Next panel remotely you must install BRAVO TTE GPRS/LAN module to your system configuration and to register your system at Ajax SP cloud service (http://teletek-ajax.com/ajax/). Then download to your smart phone or tablet the mobile application Home ProTTEct, which is available for Android and iOS:

**BRAVO SetAPP** – Programming and settings via Bluetooth connection with the panel. Possible handsfree disarming (via Bluetooth) when the smartphone and BRAVO Next panel are in range. The application is available for Android system platform:

**ProsTTE** – Programming and settings specialised software, available for download from authorised users from Teletek Electronics JSC website: www.teletek-electronics.com

## USER INSTRUCTIONS

# *8. Arm and Disarm Management*

### *8.1. Full Arming Mode*

Full arming mode means all zones are secured except the bypassed ones.
The arming is performed with a key fobs, wireless keyboard, mobile application Home ProTTEct or user web interface Ajax SP.

To perform full arm of the system:

- ***Via key fob*** - press button of the key fob.
- ***Via keyboard*** – enter in sequence:
  User Code - button – 1

An exit time starts running during which the user must leave the premises.

**ATTENTION**: The arming can be instant without exit time for leaving the premises. This depends on the set default type configuration of the zones - see the settings of dip-switch 6 in the object card, item 11!

### *8.2. Stay Arming Mode*

Stay arming mode means the user is allowed to stay at certain zones - this is a partial arming of the system. The zones which will stay disarmed in this mode must be programmed via ProsTE software.

To perform Stay arm of the system:

- ***Via key fob*** - press A or B button of the key fob.
- ***Via keyboard*** – enter in sequence:
  User Code - button – 2

An exit time starts running during which the user must leave the premises.

**ATTENTION**: The programmable buttons must be enabled for operation with setting the “Stay ARM” option via ProsTE software or BRAVO SetAPP smartphone application - check the setting in the object card, item 11!

### *8.3. Disarming*

Going in the entrance zone the user must disarm the system during the entry time running. The user can disarm the system with a key fobs, wireless keyboard, mobile application Home ProTTEct, user web interface Ajax SP or via panels’ buttons.

#### *8.3.1. Disarming via key fob*

To disarm the system, press button of the key fob.

#### *8.3.2. Disarming via wireless keyboard*

To disarm the system, enter valid User code.

#### *8.3.3. Disarming via panel buttons*

**Attention: This functionality is available only if a special disarm code is set via ProsTE software!**

**Use the arrow buttons to enter digits from 1 to 9, and 10 for 0.**

**Example**
For illustration of the specialized code entering, we will present entering of Disarm code 3208:

| | |
|---|---|
| The system is in Full or Stay ARM mode. | |
| Press button | |
| Zone 1 is blinking in yellow | 1 |
| Press the “Forward” arrow button to digit 3 | |
| Zone 3 is blinking in yellow | 3 |
| Confirm – Press and hold the button for 2-3 sec. | |
| Zone 3 will light for short in green – the digit is confirmed | 3 |
| Press the “Back” arrow button back to digit 2 | |
| Zone 2 is blinking in yellow | 2 |
| Confirm – Press and hold the button for 2-3 sec. | |
| Zone 2 will light for short in green – the digit is confirmed | 2 |
| Press the “Forward” arrow button to digit 10 (*10 is used for entering of 0*) | |
| Zone 10 is blinking in yellow | 10 |
| Confirm – Press and hold the button for 2-3 sec. | |
| Zone 10 will light for short in green – the digit is confirmed | 10 |
| Press the “Back” arrow button back to digit 8 | |
| Zone 8 is blinking in yellow | 8 |
| Confirm – Press and hold the button for 2-3 sec. | |
| Zone 8 will light for short in green – the digit is confirmed | 8 |

**ATTENTION**: Entering of the specialized disarm code can be cancelled at any time by pressing the “Programming” button – that will reject the entered digits and the user can restart the code performing.

## USER INSTRUCTIONS

# *9. Operation with the System*

### *9.1. Reviewing of Alarm events*

Button  lights on permanently in red.

Press the button to review the current alarm events. The zone number with the newest (last in the time) alarm is blinking and the group device indicator is lighting on. The other zone numbers with active alarms are lighting on. **Use the arrow buttons to review the order of the alarms as:**

- arrow  for scrolling to the before last alarm;

- arrow  for scrolling to the first alarm. While the zone number is selected the LED of the device enrolled to it is blinking in yellow.

### *9.2. Clearing of Alarm events*

The indication for the alarms will stay active until the next arming, but user can clear it also manually.

To clear manually the alarms, press in sequence:


To exit from the Reviewing Alarms Mode, press the "Memory" button once again. The exit is automatic after 3 minutes if there is no pressed button.

### *9.3. Reviewing Troubles Mode*

Button  lights on permanently in yellow.

The panel performs two short sound signals at every 20 seconds.

Press the "Attention" button to review the current troubles indicated from devices and/ or the panel. For detailed description of the indicators see also items 5.1 and 5.2.

To exit from the Reviewing Troubles Mode, press the "Attention" button once again. The exit is automatic after 3 minutes if there is no pressed button.

After exit from the Reviewing Troubles Mode the sound signalization will stop. LED indication will remain active until restoring of the current troubles.

### *9.4. Reviewing of Bypassed Devices*

Button  lights on permanently in yellow.

Press the button to review the bypassed devices. The zone number of the first bypassed device is blinking and the group device indicator is showing its type. The LED of the selected device is blinking in yellow. Use the arrow buttons to review the other bypassed devices.

Press the  button to review if there are bypassed devices from other group types.

To exit from the Reviewing Bypassed Devices, press the "Bypass" button once again. The exit is automatic after 3 minutes if there is no pressed button.

### *9.5. Erasing the Log Memory*

**ATTENTION**: The full list of the last 300 memory events can be viewed via ProsTE software, Home ProTTEct smartphone application and Ajax SP web application.

To erase the log memory:

- Enter in "Device enrolment" mode.
- Use the arrows to select a free zone or position – it is blinking in green.
- Press and hold at the same time buttons  .
- The panel will confirm the erasing with a sound signal.

### *9.6. Test of the Panel's LED Indication*

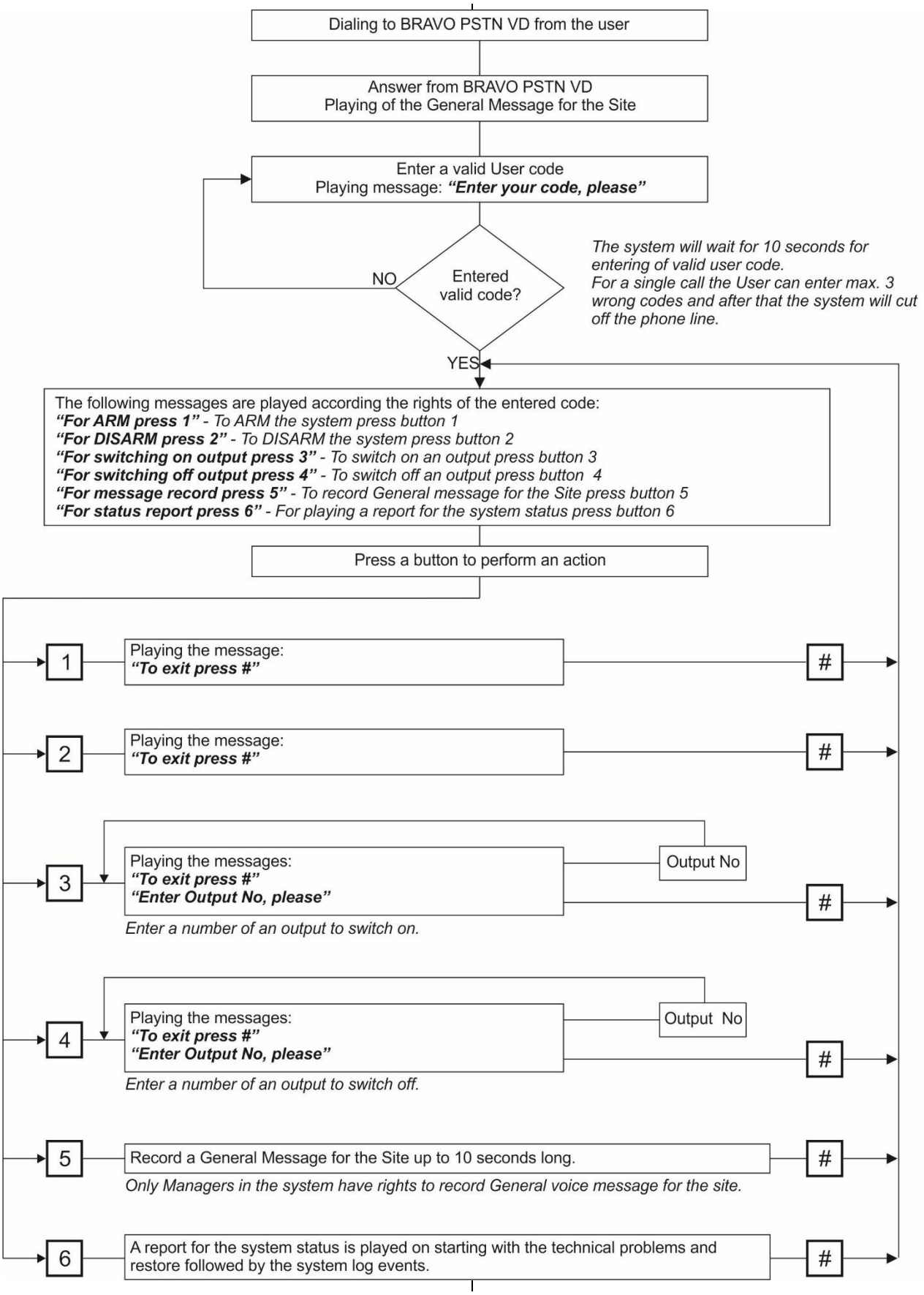
This is a test for the operation of all LED indicators on the front panel of BRAVO Next – status LED; buttons MEMORY, TROUBLE, BYPASS, Programming; LEDs for device groups, device troubles, panel troubles; LEDs for zones/positions.

- Enter in "Device enrolment" mode and select Zone Walk Test Menu by pressing 3 times Programming button:


- Press the  button. All LEDs start lighting in sequence in the supported colors. When the test is complete the panel goes back to the Zone Walk Test.

### *9.7. Algorithm for Controlling the BRAVO Panel via BRAVO PSTN VD Module*

The BRAVO Next systems with BRAVO PSTN VD communication module allows the Users to perform a remote controlling of panel. *If within 40 seconds there is no action – pressed button, the system will automatically cut off the telephone line.*



# MAINTENANCE

## *10. Replacing Batteries*

**IMPORTANT:**
**IT IS OBLIGATORY TO REMOVE THE BATTERIES OF ALL DEVICES if the BRAVO Next system will not be in use for a long time and the main and back-up power supplies of the panel are switched off.**

**Tips & Tricks...**

- Bypass the device before replacing its battery so to eliminate the tamper signalization from the panel.
- The battery life can be increased if the LED indication of devices is disabled – this setting is individual for every device and can be adjusted via ProsTE software or BRAVO SetAPP application.
- After indication from the panel for low battery of a device, the user/ installer must replace the discharged battery within one month.

### *10.1. Replacing the Panel's Battery*

**ATTENTION**: Use only Li-Po batteries supplied by the manufacturer, with parameters 3,7V/ 4100mAh and max. size 80x65x10mm!

To replace the battery with new:

- Switch off the mains power supply of the panel.
- Undo the two screws fixing the front panel to the bottom. The cover must be closed.
- Switch off the battery – set the dip-switch "Battery" in "OFF" position.
- Switch off the "Battery" connector from the terminal.
- Remove the cover of the battery.
- Replace the battery with new. Run the cable with connector through the side opening of the cover. Mount the battery cover back on its place.
- Switch on the "Battery" connector to the terminal and set the dip-switch "Battery" in "ON" position.
- Close the box and switch on the mains power supply of the panel.
- Set the internal clock with ProsTE software, mobile application Home ProTTEct, BRAVO SetAPP or interface Ajax SP.

### *10.2. Remote key fobs*

**ATTENTION:** Use only batteries approved by the manufacturer. Use only IEC 60086-4 tested batteries!

| Key fob | Battery |
|---|---|
| PAX RC | 1x3V/600mAh, type CR2450 |
| PAX Panic | 1x3V/190mAh, type CR2032 |

To replace the battery with new:

- Remove the cover of the key fob.
- Remove the battery.
- Wait for 10-15 seconds and place the new battery as observing the polarity.
- The LED will light on in sequence in red and green.

### *10.3. Detectors and Keyboards*

**ATTENTION**: Use only Panasonic batteries approved by the manufacturer, type CR123A 3V/ 1500mAh! Use only IEC 60086-4 tested batteries!

To replace the battery with new:

- Remove the cover of the detector's enclosure.
- Remove the battery (two batteries in PAX FD and PAX KBD – replace all with new ones).
- Press several times the ENROLL button.
- Wait for 10-15 seconds and place the new battery (or batteries), as observe the polarity.
- The LED lights in sequence in red, then in green.
- Mount back the cover of the device enclosure.

### *10.4. Sirens*

**ATTENTION: For replacing use only battery packs approved by the manufacturer:**

| Siren | Battery pack |
|---|---|
| PAX SR INTR | 4x3V, Lithium, size "A" |
| PAX SR EXT | 4x3V, Lithium, size "A" |

To replace the battery pack with new:

- Remove the sounder covers to access the PCB.
- Switch off the connector of the battery pack and dismount it from the plastic bottom.
- Press several times the ENROLL button.
- Wait for 10-15 seconds and switch on the connector of the new battery pack, as observe the polarity.
- The LED will light first in red and then continuously in green.
- Mount the covers back on their places.

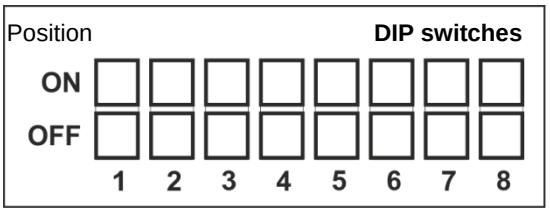
**SAFETY PRECAUTIONS**: Keep new and used batteries away from children! If the battery compartment does not close securely, stop using the product and keep it away from children's reach. If swallowed, the coin-sized batteries can cause serious injuries and burns in just 2 hours. In case of any doubt for swallowing of a battery, seek for medical help immediately!

## MAINTENANCE

### *11. Object Cart*

The object card of the site should be filled in by the installer after the installation and configuration via ProsTE software or BRAVO SetAPP.

- Hardware settings of the dip-switches:




- Panel Settings:

| | | |
|---|---|---|
| Enabled signalization for panic alarms | MEDICAL Panic | ☐ |
| | POLICE Panic | ☐ |
| Enabled signalization for troubles | Lost device/ Open tamper of a device | ☐ |
| | Low battery of a device | ☐ |
| | Open tamper of the panel | ☐ |
| | Loss of main 230VAC | ☐ |
| | Low battery of the panel | ☐ |
| | No communication | ☐ |
| Enabled sounds from the panel | Buttons | ☐ |
| | Alarm | ☐ |
| | Entry time | ☐ |
| | Exit time | ☐ |
| | Chime | ☐ |
| Signalization for lost main power supply 230V | Immediate | ☐ |
| | Delayed, …….. minutes | |
| Signalization for open tamper - panel | No | ☐ |
| | Only in ARM | ☐ |
| | Always | ☐ |
| Times | To exit the site: …….. sec. | |
| | To entry the site: …….. sec. | |
| | Alarm cycle: …….. min. | |
| | Daylight Saving | ☐ |
| AutoBypass of a Zone | Number of activations | |
| Standard | EN 5450131 Grade2 | ☐ |
| Special | User code for disarming (.....) | ☐ |

- Communication and management:

| | | |
|---|---|---|
| Comm. modules installed | GPRS | ☐ |
| | PSTN digital communicator | ☐ |
| | PSTN VD digital communicator and voice module | ☐ |
| | LAN | ☐ |
| | MIO/Wired Zones:<br>MIO Mode<br>PGM Mode<br>Wired Zone 1 (Device No…..)<br>Wired Zone 2 (Device No…..)<br>Wired Zone 3 (Device No…..)<br>Wired Zone 4 (Device No…..) | ☐<br>☐<br>☐<br>☐<br>☐<br>☐ |
| Ajax SP | Yes | ☐ |

- Type of control devices (key fob/keyboard):

| Number | Type | Programmed buttons | |
|---|---|---|---|
| | | A | B |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |

- Function of RC programmable buttons button:

| Function | PAX Remote Key Fobs | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| None | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Stay ARM | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| FIRE Panic | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| MEDICAL Panic | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| POLICE Panic | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Outdoor sounder check | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| PGM 1 on/off | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| PGM 2 on/off | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| PGM 3 on/off | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| PGM 4 on/off | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| PGM 5 on/off | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| PGM 6 on/off | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

- Zones (location and names):

| № | Type | Detector | Room |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

# GUARANTEE

## GUARANTEE

**The guarantee terms are determined by the serial number (barcode) of the electronic device!**
During the guarantee period the manufacturer shall, at its sole discretion, replace or repair any defective product when it is returned to the factory. All parts replaced and/or repaired shall be covered for the remainder of the original guarantee, or 6 months, whichever period is longer. The original purchaser shall immediately send manufacturer a written notice of the defective parts or workmanship.

### INTERNATIONAL GUARANTEE

Foreign customers shall possess the same guarantee rights as those any customer in Bulgaria, except that manufacturer shall not be liable for any related customs duties, taxes or VAT, which may be payable.

### GUARANTEE PROCEDURE

The guarantee will be granted when the appliance in question is returned. The guarantee period and the period for repair are determined in advance. The manufacturer shall not accept any product, of which no prior notice has been received via the RAN form at: https://teletek-electronics.com/en/ran-form .
The setup and programming included in the technical documentation shall not be regarded as defects. Teletek Electronics bears no responsibility for the loss of programming information in the device being serviced.

### CONDITIONS FOR WAIVING THE GUARANTEE

This guarantee shall apply to defects in products resulting only from improper materials or workmanship, related to its normal use. It shall not cover:

- Devices with destroyed serial number (barcode);
- Damages resulting from improper transportation and handling;
- Damages caused by natural calamities, such as fire, floods, storms, earthquakes or lightning;
- Damages caused by incorrect voltage, accidental breakage or water; beyond the control of the manufacturer;
- Damages caused by unauthorized system incorporation, changes, modifications or surrounding objects;
- Damages caused by peripheral appliances unless such peripheral appliances have been supplied by the manufacturer;
- Defects caused by inappropriate surrounding of installed products;
- Damages caused by failure to use the product for its normal purpose;
- Damages caused by improper maintenance;
- Damages resulting from any other cause, bad maintenance or product misuse.

In the case of a reasonable number of unsuccessful attempts to repair the product, covered by this guarantee, the manufacturer's liability shall be limited to the replacement of the product as sole compensation for breach of the guarantee. Under no circumstances shall the manufacturer be liable for any special, accidental or consequential damages, on the grounds of breach of guarantee, breach of agreement, negligence, or any other legal notion.

### WAIVER

This Guarantee shall contain the entire guarantee and shall be prevailing over any and all other guarantees, explicit or implicit (including any implicit guarantees on behalf of the dealer, or adaptability to specific purposes), and over any other responsibilities or liabilities on behalf of the manufacturer. The manufacturer does neither agree, nor empower, any person, acting on his own behalf, to modify, service or alter this Guarantee, nor to replace it with another guarantee, or another liability with regard to this product.

### UNWARRANTED SERVICES

The manufacturer shall repair or replace unwarranted products, which have been returned to its factory, at its sole discretion under the conditions below. The manufacturer shall accept no products for which no prior notice has been received via the RAN form at: https://teletek-electronics.com/en/ran-form .
The products, which the manufacturer deems repairable, will be repaired and returned. The manufacturer has prepared a price list and those products, which can be repaired, shall be paid for by the Customer. The devices with unwarranted services carry 6 months guarantee for the replaced parts.
The closest equivalent product, available at the time, shall replace the products, the manufacturer deems un-repairable. The current market price shall be charged for every replaced product.

TELETEK

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