



**ABSOLUTA®**  
**3.60**

**Expandable Hybrid Control Panel**



Legacy...

Design...

Power...

*Architecture and Engineering Specification*



**BENTEL  
SECURITY**

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The purpose of this document is to introduce you to the ABSOLUTA Expandable Hybrid Control Panel, and to provide you with the detailed information on its specifications and features. The following areas are covered in this document:

- Regulatory requirements
- Model features
- System performance
- Specifications

## System Overview

The full-featured ABSOLUTA security systems have been especially designed to satisfy all security needs, from residential to advanced industrial applications.

The objective of the ABSOLUTA is to make end-user operation simple and help the Installer improve efficiency. This is achieved by reduced complexity software and firmware, and remote programming and diagnostic facilities.

This system provides impressive application flexibility and many interesting features such as monitoring facilities and telephone access.

You can create the control panels listed following, by assembling the available components, as summarized in the Table 1.

Versions	Main Boards	Boxes	Power Supplies
ABS16P15*	ABS16	ABS-P	BAQ15T12
ABS16P35*			BAW35T12
ABS42P15*	ABS42		BAQ15T12
ABS42P35*			BAW35T12
ABS42P50*			BAW50T12
ABS104P50*	ABS104		BAW50T12
ABS16M35	ABS16	ABS-M	BAW35T12
ABS16M50-G3**			BAW50T12
ABS42M50*	ABS42		BAW50T12
ABS42M75*			BAW75T12
ABS104M50*	ABS104		BAW50T12
ABS104M75*			BAW75T12
ABS104M75-G3**		BAW75T12	

**Table 1** \*) Grade 2 control panels; \*\*) Grade 3 control panels.

**ABS16P15** Up to 8 zone control panel, expandable up to 16 zones, in plastic box with 1.5 A power supply.

**ABS16P35** Up to 8 zone control panel, expandable up to 32 zones, in plastic box with 2.6 A power supply.

**ABS42P15** Up to 8 zone control panel, expandable up to 42 zones, in plastic box with 1.5 A power supply.

**ABS42P35** Up to 8 zone control panel, expandable up to 42 zones, in plastic box with 2.6 A power supply.

**ABS42P50** Up to 8 zone control panel, expandable up to 42 zones, in plastic box with 3.6 A power supply.

**ABS104P50** Up to 8 zone control panel, expandable up to 104 zones, in plastic box with 3.6 A power supply.

**ABS16M35** Up to 8 zone control panel, expandable up to 16 zones, in metal box with 2.6 A power supply

**ABS42M50** Up to 8 zone control panel, expandable up to 42 zones, in metal box with 3.6 A power supply.

**ABS42M75** Up to 8 zone control panel, expandable up to 42 zones, in metal box with 5.4 A power supply.

**ABS104M50** Up to 8 zone control panel, expandable up to 104 zones, in metal box with 3.6 A power supply.

**ABS104M75** Up to 8 zone control panel, expandable up to 104 zones, in metal box with 5.4 A power supply.

### ■ Grade 3 Control Panels

The control panels listed below are shipped partially assembled and adopt some measures that make them compliant with **Grade 3** of the **EN50131** standard.

**ABS16M50-G3** Up to 8 zone control panel, expandable up to 16 zones, in metal box with 3.6 A power supply.

**ABS104M75-G3** Up to 8 zone control panel, expandable up to 104 zones, in metal box with 5.4 A power supply.

## ■ European Approvals

### CE

- 2014/35/EU The Low Voltage Directive
- 2014/30/EU The Electromagnetic Compatibility Directive
- EN 50130-4:2011 + A1:2014 Immunity Requirements for Components of Fire, Intruder, and Social Alarm Systems
- EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 ITE. Safety. General Requirements

### EN

- EN 50131-1:2006 + A1:2009 Intrusion System General Requirements, Grade 2/Grade 3, Class II
- EN 50131-3:2009 Control and Indicating Equipment, Grade 2/Grade 3, Class II
- EN 50131-6:2008 + A1:2014 Power Supplies, Grade 2, Type A (12h standby time with AC trouble transmitted)
- EN 50130-5:2011 Environmental Test Methods for Alarm Systems, Class II
- EN 50136-2:2013 Alarm Systems – Alarm Transmission Systems and Equipment Part 2-1: General Requirements for alarm transmission equipment
- EN 50131-5-3:2005 + A1:2008 Alarm systems. Intrusion systems. Requirements for interconnections equipment using radio frequency techniques
- EN 50136-1:2012 Alarm systems. Alarm transmission systems and equipment. General requirements for alarm transmission systems
- EN 61000-6-3:2007 + A1:2011 Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments

# Model Feature Overview

This chapter lists the features of each ABSOLUTA control panel.

## ■ Common Features for All Versions

**Zones/outputs dynamic allocation** Each zone and each output can be programmed as “Not used”. This will allow the installer to have the maximum number of zones even if an expander is not fully used. The panel will build a correspondence between the number of a zone and its physical location.

E.g. the zone nr. 7 can be located on expander nr. 1, terminal T1, and the zone nr. 8 can be located on expander nr. 2, terminal T4.

Features	ABS16	ABS42	ABS104
Zones on board (min/max)		4/8	
Outputs on board: relay		1	
Outputs on board: open collector (min/max)		2/6	
Max number of wired zones	16	42	104
Max number of wireless zones		32	
Max number of zones	32	42	104
Max number of outputs	6	20	50
Max number of input expanders	16	32	32
Max number of output expanders	16	16	16
Max number of keypads	8	8	16
Max number of user PINs	31	63	127
Installer PINs		1	
Level 4 PINs		1	
Max number of key readers	16	32	32
Max number of keys	64	128	250
Max number of key fobs		16	
Max number of power supply stations	4	4	4
Max number of wireless receivers		1	
Max number of audio stations		1	
GSM module		1	
IP module		1	
Partitions	8	8	16
Max number of events in loader		2.000	
Timers		16	
Voice messages		1 x 12 seconds + 205 x 6 seconds	
Telephone numbers		32	

**Table 2** Main-boards features summary.

### **On board inputs**

- 4 zones
- 4 programmable terminals (zones/outputs)
- Zones supervision (NC / NO / EOL / DEOL)
- Fully-programmable input-zones
- 1 supervised 24h tamper zone

### **On board outputs**

- 1 programmable alarm output 2 A relay (bell output)
- 2 programmable open-collector outputs
- 4 programmable terminals (zones/outputs)
- Fully programmable output options (polarity, timing, events, timers)
- Supervised bell circuit

### **Peripherals**

- ABSOLUTA M-Touch keypad
- ABSOLUTA T-Line LCD keypad
- PREMIUM LCD keypad
- CLASSIKA LCD keypad
- M-IN/OUT input/output expander module
- ECLIPSE2 proximity reader
- PROXY2 proximity reader
- BXM12 power supply station

### **Wireless**

- 1 wireless receiver at 433 or 868 MHz (optional)
- Up to 16 key fobs
- Up to 32 wireless detectors

### **Interfaces**

- New Bentel BPI Plus bus (+12 V only)
- KEYBUS bus for wireless receiver
- PC-Link interface
- USB OnTheGo Device/Host

**Options AS100** 2-way audio station for remote listening (speaker and microphone)

### **Communications**

- Integrated PSTN interface
- Phone line monitoring
- Double call
- Line-sharing management
- Up to 32 telephone numbers for voice/SMS dialler and central station



- Supports CONTACT ID and SIA reporting formats
- Programmable test call
- Remote servicing
- Periodic transmission test
- Integrated voice calls
- Up to 206 voice messages, total time 20.7 minutes
- Voice guide by telephone, with remote DTMF device management
- Down-loadable pre-recorded voice messages

### **Management**

- 127+1 programmable codes (from 4 to 6 digits)
- Supports a total of 250 proximity keys
- Programmable automatic arming/disarming features
- Partition bypass for patrol purposes with automatic or manual re-arming
- 5 partitions arming mode:
  - Away arming;
  - A, B, C, D modes (each mode can be programmed for any action on partitions).  
Only A and B modes are available for key-readers
- Programming from a LCD or touchscreen keypad
- Local programming from a PC via RS232/USB
- Remote programming
- Accepts commands from touch-tone phones (arm, disarm, turn ON/OFF outputs, partition and zone status check)
- Remote talk/listen-in (requires optional **AS100** 2-way audio station)
- 2000 event memory with date and time details
- Priority management of events (processing and reporting): 1) Alarm/Hold-up, 2) Tamper, 3) Trouble and Bypass
- 3 function keys for immediate alarm calls from keypad

### **GSM/GPRS** Only with the optional ABS-GSM Module.

- Quad Band
- Support for the GSM/GPRS channel
- Main or backup dialler
- Transmission of voice messages by GSM
- Transmission of Contact ID and SIA by GSM
- Transmission of events in Contact ID and SIA format via GPRS to Sur-Gard SYSTEM receivers.
- Reporting of events by text messages
- Library of 250 text messages: 1 heading message, 8 status messages, and 241 personal messages
- 32 events controlled by text messages
- 32 events controlled by caller ID (at no cost)
- Checks the control panel's status by text messages

- ❑ Arm/Disarm partitions via text messages (ONLY Grade 2 control panels)
- ❑ Checks the credit left on the prepaid SIM card
- ❑ Teleservice by internet (GPRS)

**IP** Only with optional **ABS-IP** module.

- ❑ Ethernet interface
- ❑ Transmission of Contact ID and SIA events to IP receivers using FIBRO protocol to Sur-Gard SYSTEM IP receivers.
- ❑ Programming and monitoring of the control panel on the LAN using BOSS
- ❑ Programming and monitoring of the control panel via the Internet, using BOSS
- ❑ Management of the control panel via Internet, using the ABSOLUTA app
- ❑ Event notification via e-mail and on the ABSOLUTA app (*push notifications*)
- ❑ Interface for ABSOLUTA integration with third-party software

**Power supply** Deep discharge battery protection

### **Housing**

- ❑ Metal box for 17 Ah battery, with BAW35T12, BAW50T12 or BAW75T12 power supply and 2 M-IN/OUT
- ❑ Plastic box for 7 Ah battery, with BAQ15T12, BAW35T12 or BAW50T12 power supply and 1 M-IN/OUT

### ■ **ABSOLUTA 16 features**

- ❑ Up to 8 keypads
- ❑ Up to 16 key readers
- ❑ Up to 32 input expanders (on the M-IN/OUT modules and/or PREMIUM and/or ABSOLUTA T-Line Keypads)
- ❑ Up to 16 output expanders (on the M-IN/OUT modules)
- ❑ Up to 16 fully-programmable wired zones
- ❑ Up to 6 outputs
- ❑ Up to 32 wireless zones (with optional receiver)
- ❑ Up to 32 total zones (wired + wireless)
- ❑ Up to 8 independent partitions
- ❑ Up to 4 power supply stations

### ■ **ABSOLUTA 42 features**

- ❑ Up to 8 keypads
- ❑ Up to 32 key readers
- ❑ Up to 32 input expanders (on the M-IN/OUT modules and/or PREMIUM and/or ABSOLUTA T-Line Keypads)
- ❑ Up to 16 output expanders (on the M-IN/OUT modules)
- ❑ Up to 42 fully-programmable wired zones (with optional input expanders)
- ❑ Up to 20 outputs (with optional output expanders)

- ❑ Up to 32 wireless zones (with optional receiver)
- ❑ Up to 42 combined zones (wired + wireless)
- ❑ Up to 8 independent partitions
- ❑ Up to 4 power supply stations

■ **ABSOLUTA 104 features**

- ❑ Up to 16 keypads
- ❑ Up to 32 key readers
- ❑ Up to 32 input expanders (on the M-IN/OUT modules and/or PREMIUM and/or ABSOLUTA T-Line Keypads)
- ❑ Up to 16 output expanders (on the M-IN/OUT modules)
- ❑ Up to 104 fully-programmable wired zones (with optional input expanders)
- ❑ Up to 50 outputs (with optional output expanders)
- ❑ Up to 32 wireless zones (with optional receiver)
- ❑ Up to 104 combined zones (wired + wireless)
- ❑ Up to 16 independent partitions
- ❑ Up to 4 power supply stations

■ **Grade 3 control panel features**

- ❑ Tripe end of line balance
- ❑ Super user
- ❑ Support for grade 3 power stations

This chapter identifies the system performance.

## ■ The Main Boards

The following main boards are available for the ABSOLUTA control panels.

**ABS16** Up to 8 zone main board, expandable up to 16 hardwired zones or 32 wireless zones, this main board is dedicated to the basic applications for residential and small commercial sectors.

**ABS42** Up to 8 zone main board, expandable up to 42 hardwired zones, this main board is dedicated to the middle-high level applications for the residential sector and to the middle level installation for the commercial/enterprise sector.

**ABS104** Up to 8 zone main board, expandable up to 104 zones. This main board is dedicated to the high level applications for the residential sector and to the middle-high level installation for the commercial/enterprise sector.

## ■ Grade 3 Control Panels

The following features applies to grade 3 control panels only.

**Tripe End of Line Balance** Supervision to detect not only the alarm and tamper, but also faults on grade 3 detectors.

**Super User** Level 3 user type with permissions to delete the tamper and fault memories (the master user CANNOT carry out these operations on grade 3 control panels), and to force certain blocking conditions on arming.

**Support for Grade 3 Power Stations** Events to indicate low voltage on the power output and the auxiliary outputs of grade 3 power stations.

## ■ The Boxes

The following boxes are available for the ABSOLUTA control panels.

**ABS-P** It is a plastic box that supports the **ABS16**, **ABS42** and **ABS104** main boards, and the **1.5 A**, **2.6 A** and **3.6 A** power supplies. In addition it can house a backup battery up to **7 Ah** and an **M-IN/OUT** input/output expander module.

**ABS-M** It is a metal box that supports the **ABS16**, **ABS42** and **ABS104** mother boards, and the **2.6 A**, **3.6 A** and **5.4 A** power supplies. In addition it can house a backup battery up to **17 Ah** and up to two **M-IN/OUT** input/output expander modules.

### ■ The Power Supplies

The following power supplies are available for the ABSOLUTA control panels.

**BAQ15T12** 1.5 A @ 13.8 Vdc switching power supply.

**BAW35T12** 2.6 A @ 13.8 Vdc switching power supply.

**BAW50T12** 3.6 A @ 13.8 Vdc switching power supply.

**BAW75T12** 5.4 A @ 13.8 Vdc switching power supply.

### ■ The Accessories

The following accessories are available to improve the performances of the ABSOLUTA control panels.

**MAXIASNC** Switch for open/removal detection.

**KST** Thermal Probe.

### ■ Plug-In Modules

The following plug-in modules can be installed inside the ABSOLUTA box to expand the capability of the control panel.

**M-IN/OUT** The **M-IN/OUT** is an input/output expander module which allows the number of zones and outputs of the control panel to be increased. It can be set to operate as 6-input expander, 6-output expander, 4-input/2-output expander, or 2-input/4-output expander. In this document the term *Input Expander* will be used to refer to the **M-IN/OUT** set to operate as an input expander or input/output expander; the term *Output Expander* will be used to refer to the **M-IN/OUT** set to operate as an output expander or input/output expander.

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☞ *An **M-IN/OUT** set as an input/output expander contributes both to the number of input expanders and to the number of output expanders connected to the control panel.*

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**ABS-IP** This is an IP module that allows you to connect the ABSOLUTA control panel to a LAN through the Ethernet interface or via WiFi, using the WiFi bridge **ABS-VAP11G** supplied on request. This makes it possible to:

- program, monitor and check the control panel via the BOSS application installed on a PC connected to the same LAN as the control panel itself;

- program, monitor and check the control panel via the BOSS application installed on a PC connected to the control panel via the Internet;
- monitor the control panel using receivers Sur-Gard SYSTEM, via IP;
- check the control panel and report events notification on iPhone and Android smartphones via the ABSOLUTA app (*push notifications*);
- report events via e-mail (*push notifications*).

**ABS-GSM** This is a GSM module that can be used by the control panel as a backup dialler if the internal PSTN dialler malfunctions or is tampered or can replace it completely in areas accessed by mobile phone services where a PSTN line is not available.

In that sense, the GSM Module is completely transparent to the control panel for the following functions:

- transmission of voice messages over a GSM channel;
- transmission of events with Contact ID and SIA protocol over a GSM channel;
- managing the control panel by telephone.

The GSM Module also allows you to:

- send text messages to a series of telephone numbers in order to report events (alarms, tampers, troubles, etc.);
- activate/deactivate the actions of the control panel (outputs, voice messages, etc.) by sending text messages to the number of the GSM Module;
- activate actions just by recognizing the number that is calling the GSM Module (at no cost);
- check the control panel's status by phone by sending and receiving text messages;
- Arm/Disarm the partitions via text messages (ONLY Grade 2 control panels);
- perform remote service (remote management and programming of the control panel) over the Internet on a GPRS channel.

### ■ Partitions

ABSOLUTA manages independent partitions (group of zones), all with stay/away control. Each partition can be programmed with its own entry/exit and auto-arm/disarm times, etc., and can be controlled by proximity keys, codes and/or input zones.

### ■ Events and Actions

The events-actions matrix determines control panel operation.

It is possible to set the following actions for each of the 2000 events managed by ABSOLUTA.

**Output activation** The event can activate up to three outputs.

**Voice messages** The event can play voice messages on the audio station, and send voice messages up to 32 telephone numbers.

Up to five voice messages can be associated with each event: the first two are fixed and depend on the event, the other three can be added for a more detailed description of the event.

**Text messages** The event can send text messages up to 32 telephone numbers: requires the optional GSM module. The text messages include the panel header, the event type, a programmable text, the time and date of the event.

**Central station messages** The event can send digital messages to central stations via PSTN and GSM (up to 32 telephone numbers), GPRS, and IP (requires the optional IP module).

**Emails** The event can send emails (requires the optional IP module).

**Push event** The event can send notification to mobile devices that have the ABSOLUTA app installed.

The factory default settings have been purpose programmed to require few or no changes for standard applications. However, the programming flexibility of the events and actions allows fully customization the system.

### ■ Communications

The ABSOLUTA's communicator manages 32 telephone numbers for vocal communications and text messages (through the optional GSM module, the **ABS-GSM**) and digital communications to Central Stations. Each communicator number can have its own account code and reporting format.

### ■ Remote Service

The remote service makes it possible to carry out actions on the control panel at a distance, without physically operating the components: basically programming (downloading/uploading options) and diagnosing control panel status.

The remote service can be implemented via Internet using the optional GSM module, **ABS-GSM**, and/or the optional IP module, **ABS-IP**.

### ■ Voice Messages

ABSOLUTA manages 206 recordable voice messages for the voice dialler, and voice driven menu facilities.

Voice communications to and from the control panel allow operations such as: listen-in, 2 way audio, input status enquiry (with voice answer); remote control of appliances (turn ON/OFF); arm/disarm partitions; alarm Reset and inhibit calls.

Access to all the "over-the-phone" features requires a telephone access code which can be disabled immediately after use.

### ■ Scheduler

The scheduler can be setup to arm/disarm partitions automatically (on a daily or weekly basis), and to control 16 daily timer events.

## ■ Programming

ABSOLUTA can be programmed from a keypad, or via the **BOSS** software application and a computer. The software application (runs under Windows) provides real-time supervisory facilities (via connection to a RS232 or USB Interface, or remote service), and will allow you to make the fullest use of all the system features. Following a list of the main BOSS's features.

- Logical grouping of options.
- Setup of all the control panel options.
- Wizard setup.
- Saving the control panel settings in a database, on the PC drive.
- Database backup and restore.
- Multi operator support with possibility of different role assignment.
- Language manager to create your own software language.
- Export/Import the control panel options to/from an USB key.
- Voice message management through the PC resources: audio files, microphone, loudspeaker.
- Export/Import the control panel voice messages to/from an USB key.
- Uploading/Downloading control panel options, locally through RS232/USB/LAN connection, and remotely through GPRS/IP connection.
- Remote service with graphic presentation of system devices status.
- Extended functionality to view and save the control panel logger.

**Minimum system requirements** To support the prerequisites for **BOSS** the following system requirements must be met.

- Processor: 600 megahertz (MHz) Pentium III compatible or faster processor, 1 gigahertz (GHz) or faster is recommended.
- RAM: 1GB of System Memory.
- Hard Disk: 2.1 GB of available space.
- CD or DVD Drive: Not required.
- Display: 1024 x 768 high colour, 32-bit (Recommended).
- Operating System: Microsoft Windows 7™ or above.

\*Windows 7™ is registered trademarks of Microsoft Ltd.

## ■ Wizard setup

Wizard setup lets you set the following options to make the control panel ready to work at the end of the power up procedure, by means of a system keypad.

**EN DEFAULT** This option is to set the panel to be compliant with EN standards.

**Panel ID** This option is to set the panel identification number.

**Language** This option is to set the system keypads language.



**System configuration** This option is to confirm or modify the addressable devices that control panels has detected on the BPI bus (keypads, key readers, power stations, input expanders, output expanders).

**Zone standby status and supervision** This option is to confirm or modify the default standby status (Normally Closed or Normally Open) and supervision (Single End of Line, Double End of Line, Triple End of Line) of the zones in the systems.

**Zone Alarm Activation Delay** This option is to confirm or modify the default alarm activation delay (instant or delayed).

**Zone Position Type** This option is to confirm or modify the position type of the zone (Internal or Perimeter).

### ■ Touchscreen Keypad

ABSOLUTA supports the **M-Touch** keypad. This keypad has a large colour display that enables graphic presentation of system information. The display is touch-sensitive so is easy and intuitive to interact with.

### General Features

- Intuitive menu-driven user interface
- Customizable graphic maps
- User menu for full management of the system
- Installer menu for easier configuration of the basic options of the system
- Responsive, high-resolution 7" (177.8 mm) full color touchscreen
- Configurable home screen
- Built-in and easy-to-update digital picture frame using integrated SD card slot
- SD card slot: holds any standard Secure Digital (SD) card\* (32 x 24 x 2.1 mm)
- Quick-view LED status indicators (Ready, Armed, Trouble and AC Power)
- Displays time and date

\*If necessary, the SD card can be formatted to file system FAT16 or 32 using a PC. The maximum size SD card supported is 32 GB.

**Customizable graphic maps** Thanks to the SD card onboard slot up to 32 GB, it is possible to configure up to 32 maps (images, pictures, plans) and include in each map up to 16 objects (zones and outputs) that will give information on the status of each single zone in real time.

It is also possible to browse or activate home automation scenarios (gate opening, garden watering, lighting control, etc.) directly from the map, with just a touch on the screen, for an even more intuitive use of the keypad.

ABSOLUTA release 3.50.72 or superior required for graphic maps.

## ■ LCD keypads

ABSOLUTA supports **PREMIUM**, **T-WHITE**, **T-BLACK**, and **CLASSIKA LCD** keypads. These keypads allow complete management of the system thanks to the LCD display, which displays information in text format. **PREMIUM**, **T-WHITE**, and **T-BLACK** keypads also include a key-reader in order to handle the main operations in a quick user-friendly way, and an input/output expander for local applications.

## ■ Key Readers

ABSOLUTA supports **ECLIPSE2**, **PROXI**, and **PROXI2** key readers. These key readers allow to handle the main operations in a quick user-friendly way. They operate without contacts, therefore, are highly resistant to oxidization and wear.

The **ECLIPSE2** key reader is designed to be installed indoors, like a regular light switch.

The **PROXI** / **PROXI2** key reader can also be installed outdoors.

The key readers can perform the following operations.

- Arm the partitions in away mode
- Arm the partitions in A mode (the key-reader partitions arm/disarm in accordance with the programmed configuration)
- Arm the partitions in B mode (the key-reader partitions arm/disarm in accordance with the programmed configuration)
- Temporary disarm the partitions
- Disarm the partitions
- Automation and access control

## ■ Wireless Devices

ABSOLUTA supports one **VRX32-433**, **VRX32-433EN** or **VRX32-868** receiver connected to the KEY BUS.

The receiver supports up to 32 wireless detectors and up to 16 keys fobs.

The receiver supports the devices listed in table 3.

Bentel's wireless technology uses a DSC (Digital Security Controls) proprietary 1-way RF protocol with no encryption.

The RF protocol is an ASK (amplitude shift keying) type with a baud rate of 1 K.

Table 3 shows the range, in open field, for each device.

ABSOLUTA can detect alarm, tamper, low battery and lost wireless detectors of the wireless detectors.

## ■ Power station

The power station has been especially designed for security system applications. The tamper protected box (protected against opening and forced removal) can house a backup battery for power supply during black-out. ABSOLUTA supports **BXM12/30-B** 3.6 A power station and **BXM12/50-B** 5.4 A power station.

Description	433 MHz devices			868 MHz devices	
	Name	Range in open field VRX32-433*	Range in open field VRX32-433EN	Name	Range in open field VRX32-868*
<i>Repeater</i>	<b>VRP-433</b>	425 m	400 m	—	—
<i>Pet-immune PIR Motion Detector</i>	<b>AMD20</b>	400 m	400 m	<b>KMD20*</b>	400 m
<i>PIR Motion Detector</i>	<b>AMD20NP</b>	400 m	400 m	<b>KMD20NP*</b>	400 m
<i>Door/Window Magnetic Contact</i>	—	—	—	<b>KMC10*</b>	270 m
<i>Vanishing Door/Window Magnetic Contact</i>	—	—	—	<b>KMC20*</b>	200 m
<i>Door/Window Magnetic Contact with Auxiliary Input</i>	<b>AMC30</b>	350 m	350 m	<b>KMC30*</b>	420 m
<i>Optical Smoke Detector</i>	<b>ASD30</b>	400 m	350 m	—	—
<i>4-button Key Fob</i>	<b>ARC20</b>	350 m	350 m	<b>KRC10</b>	350 m
<i>Personal Panic Button</i>	—	—	—	<b>KRP10</b>	—

**Table 3** Wireless devices supported by ABSOLUTA: \*) These devices NOT comply to EN50131-1 and EN50131-3.

## Compatible items

Table 4 summarizes the items compatible with the ABSOLUTA system: refer to the items instructions for further information.

<b>ABS-IP</b>	<i>IP Module</i>
<b>ABS-VAP11G</b>	<i>WiFi Bridge</i>
<b>ABS-GSM</b>	<i>GSM Module</i>
<b>BGSM-100CA</b>	<i>GSM Antenna for metal box (ABS-M)</i>
<b>ABS-AK</b>	<i>GSM Antenna for plastic box (ABS-P)</i>
<b>ANT-EU</b>	<i>External GSM Antenna</i>
<b>M-IN/OUT</b>	<i>6 Input/Output Expander</i>
<b>ABSOLUTA M-Touch</b>	<i>Touchscreen Keypad</i>
<b>ABSOLUTA T-Black</b>	<i>LCD keypad with Input/Output Expander and Proximity Reader on-board, black</i>
<b>ABSOLUTA T-White</b>	<i>LCD keypad with Input/Output Expander and Proximity Reader on-board, white</i>
<b>PREMIUM LCD</b>	<i>LCD Keypad with Input/Output Expander and Proximity Reader on board</i>
<b>CLASSIKA LCD</b>	<i>LCD Keypad</i>
<b>ECL2-UKR (ECLIPSE2)</b>	<i>Recessed Universal Reader Module for Proximity Key</i>
<b>ECL2-C (ECLIPSE2)</b>	<i>Cover for ECL2-UKR Universal Reader Module</i>
<b>PROXI/PROXI2</b>	<i>Indoor/Outdoor Proximity Reader (IP34), for Proximity Key</i>
<b>SAT</b>	<i>Proximity Key</i>
<b>SAT2</b>	<i>Proximity Key</i>
<b>PROXI-CARD</b>	<i>Proximity Card</i>
<b>MINIPROXI</b>	<i>Proximity Tag</i>
<b>PROXI-TAG/B</b>	<i>Black Proximity Tag</i>
<b>PROXI-TAG/G</b>	<i>Gray Proximity Tag</i>
<b>PROXI-TAG/W</b>	<i>White Proximity Tag</i>
<b>AS100</b>	<i>Microphone + Loudspeaker Station</i>
<b>BRM04/12</b>	<i>4-Relay module for open-collector outputs</i>
<b>BXM12/30-B</b>	<i>3.6 A BPI power supply Station</i>
<b>BXM12/50-B</b>	<i>5.4 A BPI power supply Station</i>
<b>VRX32-868</b>	<i>868 MHz KEYBUS Receiver</i>
<b>VRX32-433</b>	<i>433 MHz KEYBUS Receiver</i>
<b>VRX32-433EN</b>	<i>433 MHz KEYBUS Receiver</i>
<b>MAXIASNC</b>	<i>Big NC Tamper Switch</i>
<b>KST</b>	<i>Thermal Probe</i>
<b>USB5M</b>	<i>5 m USB Cable</i>
<b>BOSS</b>	<i>Console Software</i>

**Table 4** *Compatible items.*

## Technical Specifications

Table 5 in the following page shows the technical Specifications of the ABSOLUTA series.

The below table shows the current draw (**I (mA)** column) and size of the accessory components.

<b>Components</b>	<b>I (mA)</b>	<b>Size (WxHxD mm)</b>
<b>ABSOLUTA Main Board</b>	<b>150</b>	<b>175x99x17</b>
<b>ABS-GSM Module</b>	<b>250</b>	<b>99x65,5x12</b>
<b>ABS-IP Module</b>	<b>300</b>	<b>99x65,5x12</b>
<b>ABSOLUTA M-Touch keypad</b>	<b>300</b>	<b>195x127.9x20.3</b>
<b>ABSOLUTA T-Line Keypad</b> with proximity reader enabled	<b>60</b>	<b>134x114x28,5</b>
with proximity reader disabled	<b>50</b>	
<b>PREMIUM Keypad</b> with proximity reader enabled	<b>60</b>	<b>134x114x28.5</b>
with proximity reader disabled	<b>50</b>	
<b>CLASSIKA Keypad</b>	<b>50</b>	<b>144.5x116x27.5</b>
<b>ECLIPSE2 Key Reader</b>	<b>30</b>	—
<b>PROXI/PROXI2 Key Reader</b>	<b>30</b>	<b>78x108x22</b>
<b>M-IN/OUT Programmable</b> Input/Output Expander	<b>20</b>	<b>108x101x34</b>
<b>BRM04/12 4 Relay Module</b>	<b>120</b>	
<b>BXM12/30-B Power Station</b>	<b>10</b>	<b>240x348x97</b>
<b>BXM12/50-B Power Station</b>	<b>10</b>	<b>240x348x97</b>

Versions	ABS16P15 ABS42P15	ABS16P35 ABS42P35	ABS42P50 ABS104P50	ABS16M35	ABS16M50-G3 ABS42M50 ABS104M50	ABS42M75 ABS104M75 ABS104M75-G3
Voltage	230 V $\sim$ -15/+10% 50/60 Hz	110-230 V $\sim$ -15/+10% 60-50 Hz				
Max. Current Draw	0.42 A	0.75 A	1.1 A	0.75 A	1.1 A	1.7 A
Power Supply Battery-Charger (Type A - EN50131-6)	13.8 V $\equiv$ $\pm$ 2% 1.5 A	13.8 V $\equiv$ $\pm$ 1% 2.6 A	13.8 V $\equiv$ $\pm$ 1% 3.6 A	13.8 V $\equiv$ $\pm$ 1% 2.6 A	13.8 V $\equiv$ $\pm$ 1% 3.6 A	13.8 V $\equiv$ $\pm$ 1% 5.4 A
Insulation Class	I					
Maximum ripple voltage on the outputs	310 mV (2.25%)					
Battery (Brand and Type)	Lead Acid 12 V / 7 Ah YUASA NP 7-12 FR or similar Case Flame Class UL94-V2 or higher			Lead Acid 12 V / 17 Ah YUASA NP 17-12 FR or similar Case Flame Class UL94-V2 or higher		
Max. Current available for peripherals and loads (Aux Output)	430 mA (7 Ah battery)			1,250 mA* (17 Ah battery)		
Max. Battery Charge Current (Battery capacity)	0.92 A (7 Ah)	2.02 A (7 Ah)	3.02 A (7 Ah)	1.2 A (17 Ah)	2.2 A (17 Ah)	4.0 A (17 Ah)
Maximum Battery Recharge Time to 80%	24 h					
Minimum Duration of Alternative Power Supply	12 h					
Low Battery Fault Generated	11.4 V					
Generation of Low Output Voltage Fault, without backup batteries	11.2 V					
Overvoltage Protection	N/A			16.7 V		
Deep Discharge Protection	9.6 V					
Digital Key Combinations	4,294,967,296					
Alarm Transmission System (ATS)	SP2 (with built-in PSTN communicator) SP5 (with <b>ABS-GSM</b> or <b>ABS-IP</b> module) DP1 (with integrated PSTN communicator and <b>ABS-GSM</b> or <b>ABS-IP</b> module) DP4 (with <b>ABS-GSM</b> and <b>ABS-IP</b> modules)					
Interface type between SPT and AS	Proprietary					
Alarm transmission operation mode (acknowledgement)	Pass-through					
Delay for alarm messages generation and transmission	2 s					
Delay for fault detection and visualization	2 s					
IP Protection Grade	IP20					
Security Grading	2 (3 for <b>ABS16M50-G3</b> and <b>ABS104M75-G3</b> control panels)					
Environmental Class	II					
Operating Temperature	-10 to +40 °C					
Operating Humidity (not condensed)	0 to 93% RH					
Dimensions (WxHxD)	319x352x92 mm (without antenna)			310x403x103 mm (without antenna)		
Weight	2.09 Kg (without battery)			4.89 Kg (without battery)		
Complies with	EN60950-1; EN50130-4; EN50131-1; EN50136-2					

**Table 5** Technical Specifications: \*) **400 mA** for Grade 3 control panels connected to a Central Station; **550 mA** in order to comply with the T 014 standard, for **ABS104M50**, **ABS104M75-G3**, **ABS42M50**, **ABS16M35**, and **ABS16M50-G3** control panels, that must be connected to a Central Station; \*\*) Supervised Premises Transceiver (Communicator) and Alarm System.

# Terminals Description

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This paragraph describes the control panel terminals. The layout of terminal description table is as follows:

- the **Ter.** column shows the terminal identifier;
- the **DESCRIPTION** column provides a brief description of each terminal;
- the **v(V)** column shows the terminal voltage (the hyphen “-” indicates that the voltage cannot be specified for the terminal concerned);
- the **i(A)** column shows the maximum current (in Amperes) that can circulate on the terminal (the hyphen “-” indicates that the current cannot be specified for the terminal concerned);
- the numbers in brackets refer to the following notes.

**(1)** The total current draw of terminals **+A**, **+N**, **+B**, **+F**, **+** and **RED** must not exceed the allowed limit for the control panel in object (refer to **Max. current available for peripherals and loads (Aux Output)** in Table 5 on page 22).

**(2)** The voltage on the **+A**, **+N**, **+B**, **+F** and **+** terminals, under normal operating conditions, can change from 13.8 V to 13.6 V. The output voltage below which a fault event is generated is 12.2 V.

**(3)** The voltage on the **RED** terminals, under normal operating conditions, can change from 13.8 V to 13.4 V.

**(4)** The max. voltage admitted on the changeover switch contacts is **15 V @ 2 A** (max. switching power **30 W**).

**(5)** In order to comply with the **T 014** standards, these terminals **CANNOT** be used to connect a wireless receiver.

Ter.	DESCRIPTION	v(V)	i(A)
<b>NC</b> <b>COM</b> <b>NO</b>	Programmable Output n. 1 (changeover switch contacts)	(4)	2
<b>+N</b>	Programmable Output n. 1 (intrinsic security), protected by fuse	13.8 (2)	1.5 (1)
<b>+A</b>	Programmable Output n. 1 (positive), protected by fuse	13.8 (2)	1.5 (1)
<b>+B</b>	Positive power supply to peripherals, protected by fuse (will be powered by the battery during mains failure)	13.8 (2)	1.5 (1)
$\neg$	Negative	0	–
<b>O1</b>	Programmable Output n. 2 (Open-Collector)	0	0.1
<b>O2</b>	Programmable Output n. 3 (Open-Collector)	0	0.1
<b>AS</b>	10 Kohm Supervised Tamper Line	–	–
	Terminals for the audio station:		
<b>RED</b>	Positive protected by fuse	13.8	0.5
<b>BLK</b>	Negative	(3)	(1)
<b>SPK</b>	Speaker		
<b>MIC</b>	Microphone		
	BPI bus for the BPI peripherals:		
<b>+</b>	Positive protected by fuse	13.8	1.5
<b>C</b>	Command	(2)	(1)
<b>R</b>	Response		
<b>–</b>	Negative		
<b>(5)</b>	KEY bus for the wireless receiver:		
<b>RED</b>	Positive protected by fuse	13.8	0.5
<b>BLK</b>	Negative	(3)	(1)
<b>YEL</b>	Receiver		
<b>GRN</b>	Data		
<b>+F</b>	Power supply to detectors ( <b>positive</b> ), protected by fuse (will be powered by the battery during mains failure)	13.8 (2)	1.5 (1)
<b>T1</b> : <b>T4</b>	Terminals programmable as input zone or output.	–	–
<b>L1</b> : <b>L4</b>	Programmable input zone	–	–
$\neg$	Negative	0	–
<b>LE</b>	External telephone line terminals	–	–
<b>LI</b>	Line-sharing devices terminals (for answerphone, telephone, fax, modem, etc.)	–	–
$\perp$	Earth Terminal	0	–



This chapter identifies the execution process, including installation, testing, and certification.

## **Installation**

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The system is installed according to the manufacturer's installation instructions and recommendations.

## **System Testing and Certification**

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The system is tested in accordance with the manufacturer's recommendations and industry standard practices.

This complete the Architecture and Engineering specification for the ABSOLUTA Expandable Hybrid Control Panel.

BENTEL SECURITY srl. reserves the right to change the technical specifications of this product without prior notice.

# ABSOLUTA



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