



## SECURITY

**VIEW**   
IoT smart life

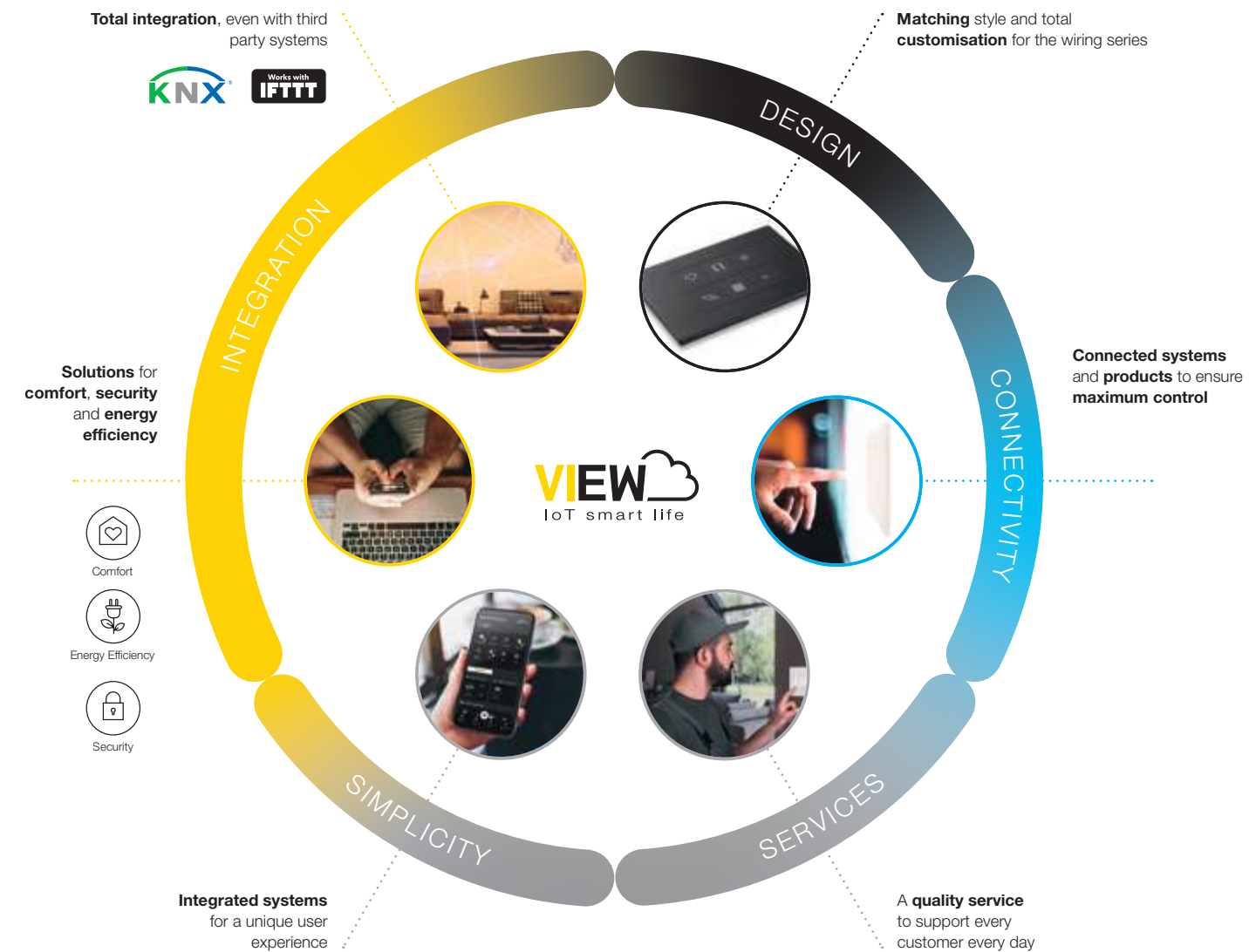
New burglar alarm system  
and video surveillance  
solutions



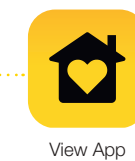


# View: an ecosystem of smart products and interconnected systems.

**View is a unique platform that includes connected systems and products for new builds, as well as for refurbishments or to modernise existing systems.** It is a set of solutions designed for comfort, energy efficiency and security, with matching styling that fits into any architectural context.



**A single app:** a unique experience and an intuitive interface, to manage, control and create scenarios, even remotely. You can integrate the App with the IFTTT platform to integrate third-party devices. With the View app, you are always connected to your living spaces, wherever you are, and are always up-to-date on what is going on inside and outside the building.





## By-alarm Plus and Elvox CCTV systems. For living safe and sound.

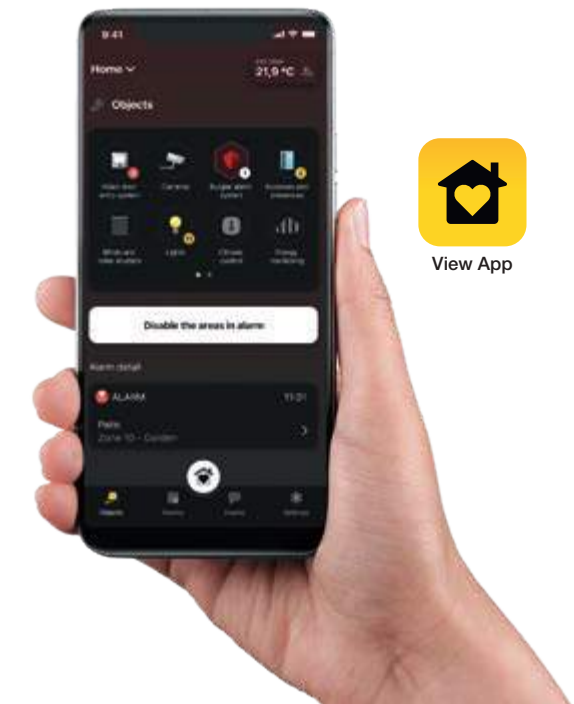
**Better security means better quality of life.** For this reason, our solutions offer high-performance products, made with the most innovative technologies to guarantee maximum security inside the building in any condition. Moreover, integration with the View IoT Smart System platform ensures that the By-alarm Plus and Elvox CCTV systems dialogue with each other so they can both be managed intuitively via the View app, even remotely from a smartphone or tablet.




### Integrated supervision

The View app allows all systems to be fully integrated:

**By-me Plus, View Wireless,  
Elvox Video Door Entry  
Systems and Elvox CCTV**



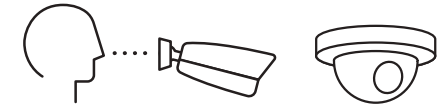


## The benefits of Vimar security systems.

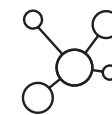
Maximum flexibility and installation freedom.



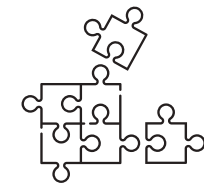
**By-alarm Plus is a professional system, certified to EN50131 / IMQ grade 3.**



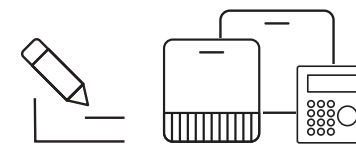
**Complete video surveillance systems.** Elvox CCTV with increasingly high-performance, high-resolution cameras of up to 8 Mpx.



**Integrated supervision. The View app fully integrates** the By-alarm Plus and Elvox CCTV systems to ensure that everything is under control, even remotely.



**Scalable solutions** to ensure maximum security in buildings of any size, from small to large.



**The control keypad, alarm siren and control unit enclosure feature an elegant and discreet design.**



Perfect **matching** and **integration** for all ranges of the Vimar wiring series.



## Integrated supervision.

For management and video check, anywhere.

With the **View App**, integration between the **By-alarm Plus** and **Elvox CCTV** systems can be exploited to provide local and remote control, including alarm notifications and video check streaming. Moreover, the View App can easily manage all of Vimar's technological building solutions from a single control interface: the **By-me Plus** home automation system, the **View Wireless** smart system, the **video door entry system**, the **Elvox CCTV** video surveillance system and the various **IoT connected devices**, making this line-up one of a kind on the market.



Functions that can be managed from the View app: video door entry system, cameras, burglar alarm system, lights, shutters, energy consumption, load management, access control.



On receiving a notification from a zone associated with a camera, the available video stream can be viewed.



Virtual keypad for entering the personal code.



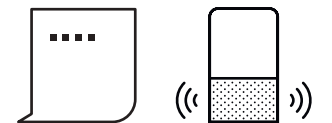
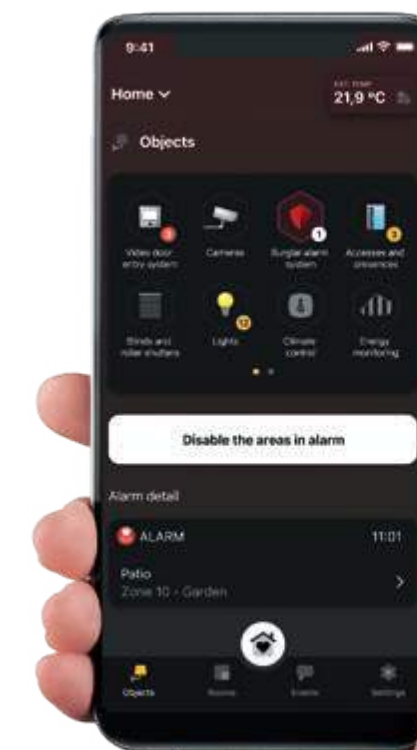
A detailed view of the zone statuses.



Active alarm.



View App

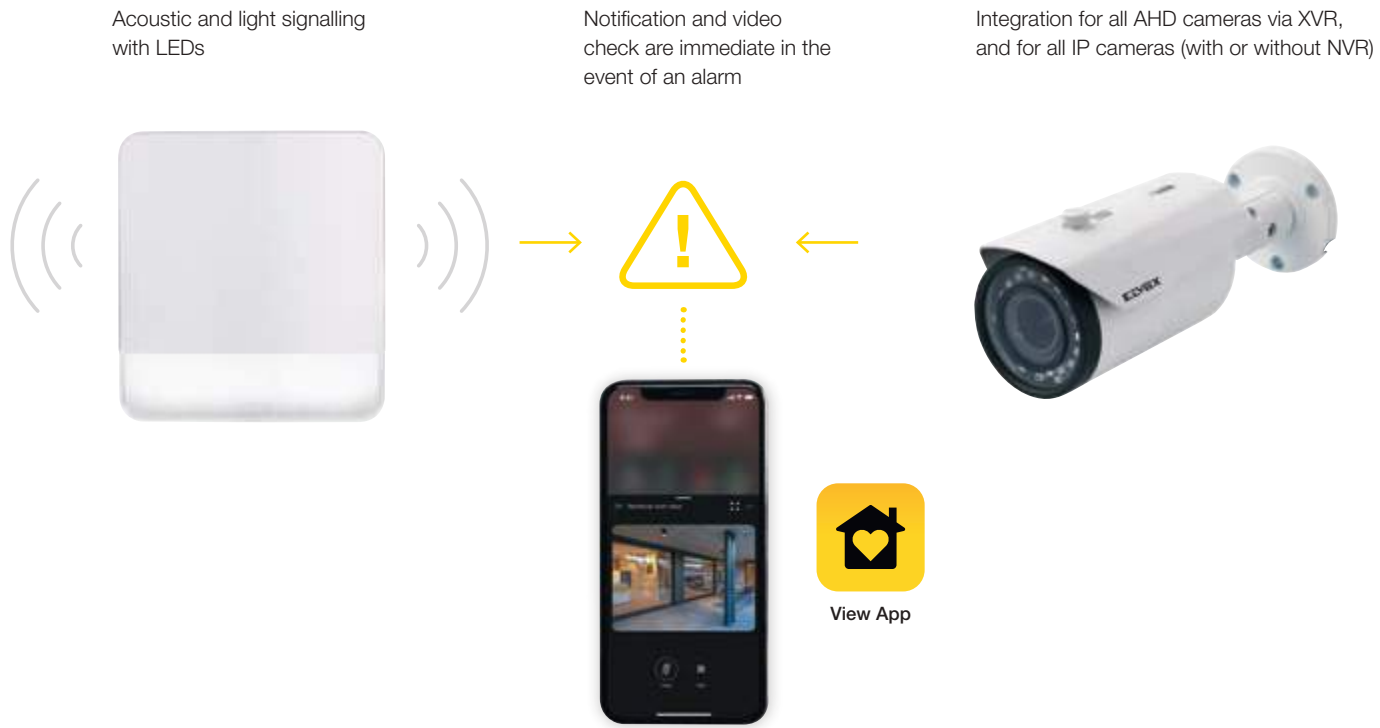




# Integrating By-alarm Plus and Elvox CCTV ensures perfect synergy and immediate control.

## 1. Video Check

If a burglar alarm system event occurs, the user will immediately receive a notification on the View app to access the live video from the corresponding zone to check what is going on. Integration between By-Alarm Plus and Elvox CCTV ensures that the nature of the alarm event can be checked immediately, allowing the user to determine what is happening, with clear live images from the zone involved.



Live Video on the View app



## 2. Preventive signalling

This option is a selective alarm only for the events selected by the user. With the Video Analysis function in the camera: the user will receive a notification on the View and By-Camera apps (via the camera alarm output connected to the By-alarm Plus burglar alarm system control unit) if a camera detects a person within the set area. The alarm can then act as in point 1.



**Preventive signalling.** This function distinguishes between people and vehicles and can filter out false alarms due to moving objects, leaves, rain or animals.



## 3. Active deterrence

The camera can emit **bright flashes** and **audio signals** (siren or customisable messages) on detecting an intrusion within the set area.



**By-alarm Plus.** A complete range for easier integration.

The By-alarm Plus system is a professional burglar alarm system made in Italy, which can operate stand-alone or be integrated with other Vimar systems via a protected IP connection. It ensures building security and is flexible and easy to install.



View App

**A single app for remote control and interaction** from anywhere.



**Control unit enclosures**



**Metal enclosure**  
for 65 and 125 zones

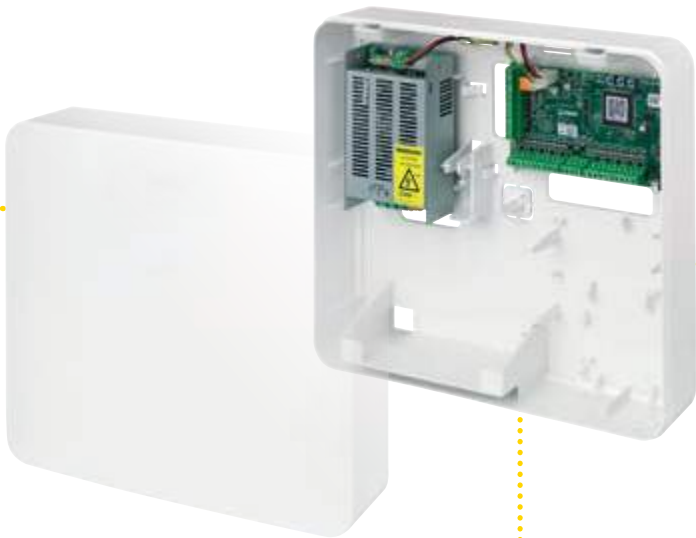


**Flush mounting control unit enclosure**  
for 25 and 65 zones



**Plastic enclosure**  
for 25 and 65 zones

**Control units**



Control unit board



Radio frequency interface



Gateway



Expansion board

**Sensors / Accessories**

**Wired motion sensors**



**Wired contact sensors**



**Flush mounting devices**



Internal siren



Transponder actuator and presence detector

**Outdoor sirens**



**Control keyboard**





Control unit.

Modern, functional and discreet.

A range of control units that are ideal for control in buildings of 25, 65 and 125 zones. They are easy to install and have been designed to be placed discreetly in any kind of environment, thanks also to their reduced depth. Metal or plastic enclosures with three styles to meet different installation and functional needs; in particular, the depth of the metal enclosure has been reduced from 125 mm to 95 mm.

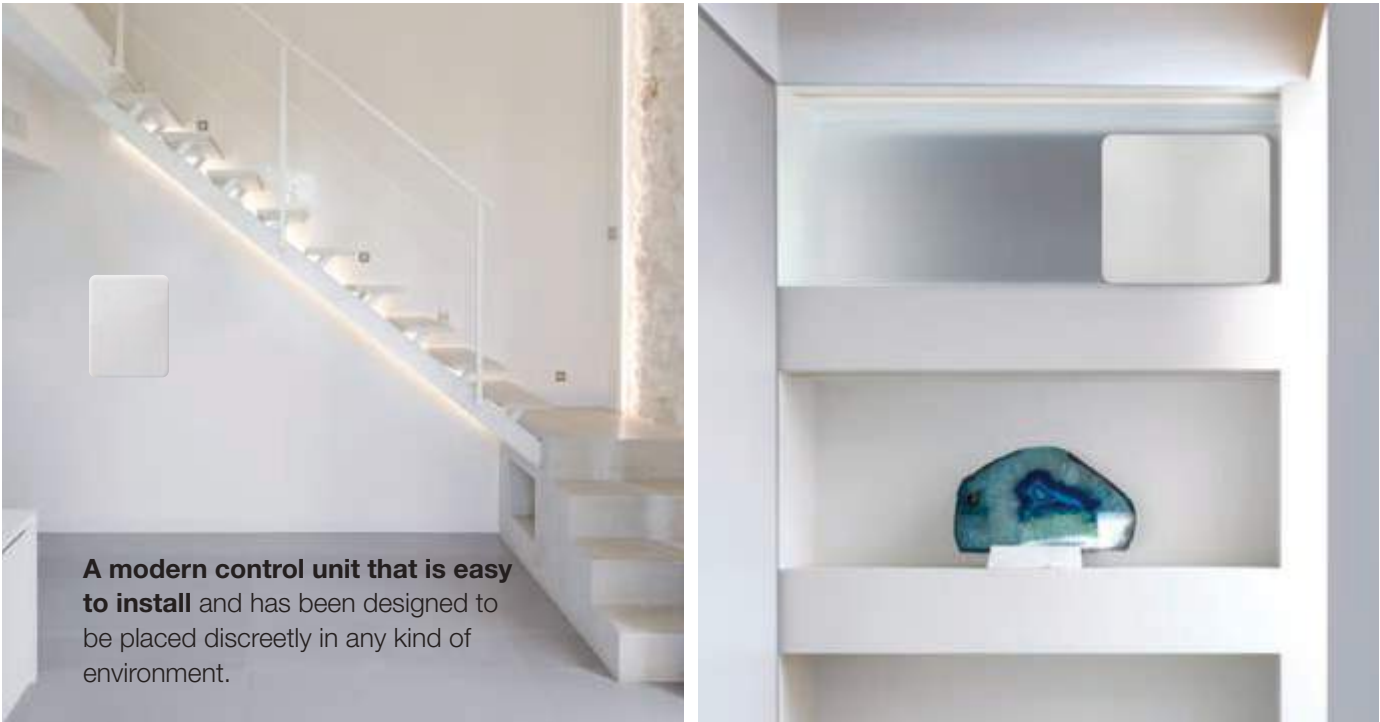


**Plastic enclosure**  
for 25 and 65 zones  
Dimensions - 350x310x85 mm

**Metal enclosure**  
for 65 and 125 zones  
Dimensions - 375x465.6x92.2 mm

**Flush mounting switchboard**  
with adaptor to go with 24 V53324 or  
V53724 modules for 25 and 65 zones.  
Provided with slots for device installation.  
Dimensions - 344.9x444.9 mm

The enclosures are designed to house the power supply unit and accessories: burglar alarm system gateway, speech synthesis board, expansion board with 5 In/Out terminals, GSM communicator, RF board (for plastic enclosures) and 7 Ah battery.

A collection of electronic components including circuit boards, a battery, and a power supply unit.

**A modern control unit that is easy to install** and has been designed to be placed discreetly in any kind of environment.

Sensors and accessories.

A complete range of wired contact sensors and motion detection sensors

to configure a functional system that can be expanded over time, allowing control of every area of the building while avoiding false alarms to ensure security during everyday activities within buildings. Dual technology passive infrared and microwave detectors, PET immune, anti-masking and anti-crawl, for surface mounting and IP54 outdoor installation for windows and doors. Indoor sirens and dual technology actuator for flush mounting devices, perfect for integration with all the Vimar wiring series: Eikon, Linea, Arké and Plana.



Wired motion sensors

Wired contact sensors

Flush mounting devices





Outdoor sirens.

Protection and installation freedom.

Reduced-depth outdoor sirens, available in the wired, bus and radio versions, supplied with 2 piezoelectric speakers and LED alarm signalling. 4 sounds and 4 timings for the bus and radio versions can be configured remotely. Maximum safety: anti-opening, anti-tear from the wall protections and anti-foam protection. They are designed to be installed in places exposed to the elements and are resistant to sudden temperature changes.



Control keypad.

Elegant in every detail.

The control keyboard has a simple, compact and functional shape; light-weight on any wall, discrete in any setting. User-friendly interface: raised screen printing helps locate the centre of the keypad and the OK/navigation arrow keys. It integrates seamlessly into any environment and with the whole Vimar wiring series.



Stand-alone kit.

A professional stand-alone system. Security with simplicity.

There are also **five kits** available to provide a base system with different options (25 zones with/without sensors and installation in the control unit, 65 zones, radio expansion kits), with the flexibility to create your own custom system.

- **3 kits for 25 zones**
  - with sensors
  - without sensors
  - for switchboard installation

- **1 kits for 65 zones**

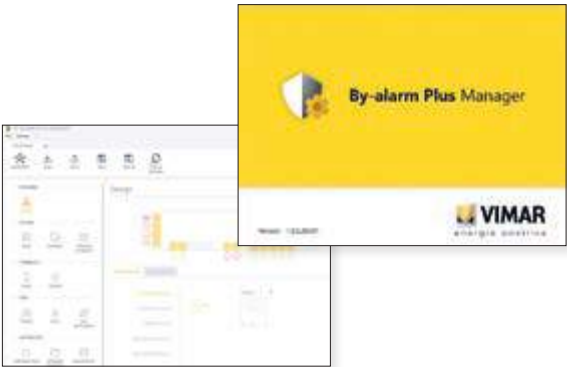
- **1 kit for radio expansion**



Plenty of functions, which are super-simple and safe to configure. For professionals.

Simplified configuration

- A single interface device for configurable inputs/ outputs.
- Choice (without restrictions) of resistor values for wired sensors, thanks to free threshold programming in the software.
- More flexible software, counting the actual number of zones used (radio and wired) (unconfigured inputs do not count).
- Automatic tracking for connected systems.



Always safer and more versatile in compliance with regulations

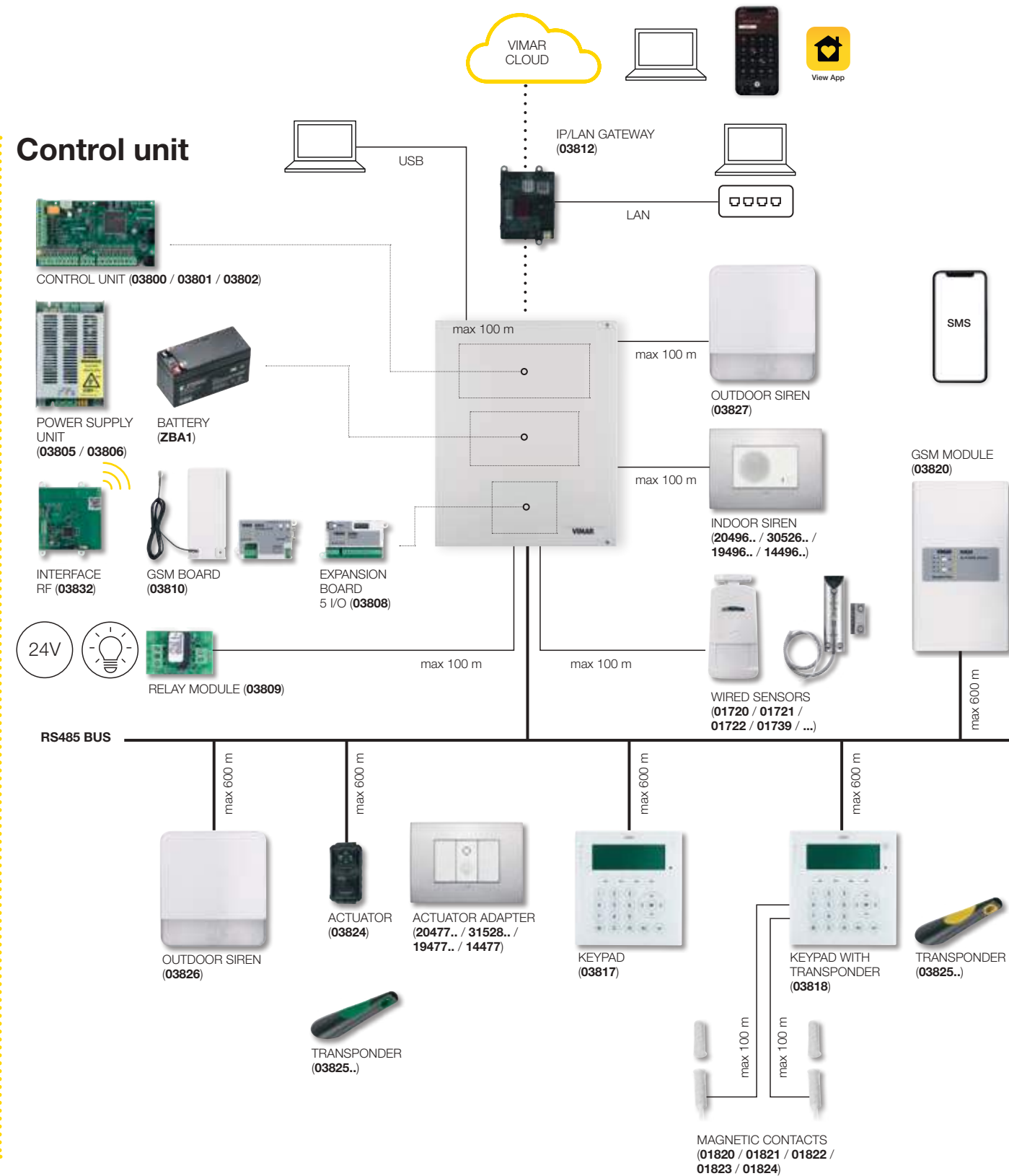
- The By-alarm Plus system offers greater security: EN 50131 / IMQ grade 3, also usable for insurance purposes. The system can also be configured to declass it to grade 2.
- System parameters can be set via software.





**By-alarm Plus.** Discover the configuration for a complete, integrated system.

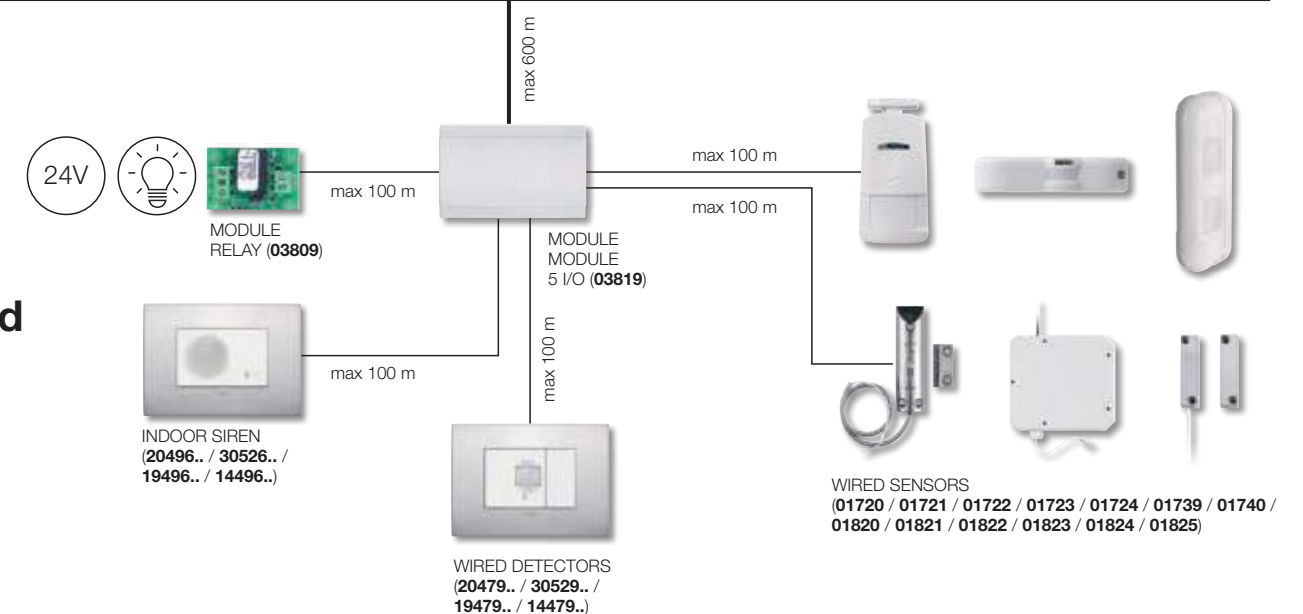
A professional system that is easy to install and highly flexible: security can be extended with a wide range of solutions. Choose and configure your wired and radio frequency system, which integrates with the Elvox CCTV video surveillance system.



## Radio frequency extension



## Wired

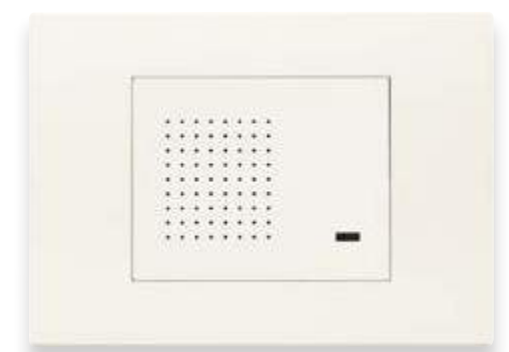


## Perfectly coordinated and integrated. For all styles of domestic environments.

**Easy to create a bespoke system.** All the By-alarm Plus system devices, such as sensors, indoor sirens and actuators, have been designed to offer the very best in terms of styling and functionality, ensuring a stylistic approach that strikes the perfect balance between consistency and attention to detail. What's more, all the flush mounting devices are available for the Eikon, Linea, Arké, and Plana series: a multitude of combination variants with varying designs, materials and colours.



Eikon Exé - Actuator with transponder



Linea - Indoor siren



Arké - Indoor siren



Plana - Detector



## Elvox CCTV video surveillance system.

Complete, up-to-date and increasingly high-performance.

A range of increasingly high-performance new cameras able to guarantee all-round control, even in critical areas. Innovative solutions, based on integrated IP and AHD technologies, specifically designed to be **controlled, even remotely**, providing a view of the monitored areas that is perfect in the smallest detail.

**New!**

**Standard Dome and Bullet cameras with high light sensitivity**  
2 Mpx, 4 Mpx, 5 Mpx and 8 Mpx



**New!**

**Plus Dome and Bullet cameras with powerful functions** can also support the By-alarm Plus system



**Plus PTZ cameras (Speed Dome)**

With tilt and zoom, the Speed Dome cameras guarantee maximum area coverage.



**XVR and NVR recorders**

There are different types of video recorders, according to the performance and transmission of the signal. XVRs interface directly with the cameras. With their considerable processing power, NVRs exploit IP technology.



Elvox CCTV. Standard and Plus cameras, a complete range to have everything under control.

New standard Dome and Bullet cameras with 2 Mpx, 4 Mpx, 5 Mxp and 8 Mpx and advanced motion functions to reduce false alarms, and the Plus version with 5Mpx and dedicated functions for perimeter control and the new event search based on metadata analysis. Once the places to be monitored and the control methods have been identified, it is easy to define which devices offer the best security for the buildings and the people living in them.

Standard Cameras

Dome and Bullet cameras with high light sensitivity - 2 Mpx, 4 Mpx, 5 Mpx and 8 Mpx.

Compact and discreet, they can be installed either on the wall or on the ceiling, both indoors and outdoors. For AHD versions, line crossing and intrusion detection functions are available via XVR. For IP versions, object and anomaly detection functions are also available.



Plus Cameras

Plus 5 Mpx version of the Dome and Bullet cameras to support the By-alarm Plus system.

Advanced video analysis functions use metadata for classification based on characteristics such as gender, clothing, vehicle recognition and person counting for in-depth searches. The VF version with deterrent function uses target identification (which distinguishes people from vehicles and motorcycles) for effective perimeter control.





# Elvox CCTV. The performance of the new ultra-high resolution camera range.

The Elvox CCTV camera range can meet different system needs. They offer superior quality and top performance that can guarantee all-round control, even in critical areas, from the smallest installation, such as a house or shop, to more complex situations, such as hotels and industries.



## Summary of camera performance

**Fixed focus and varifocal**  
(including with motorised lens)

**High Resolution**  
2 to 8 MPX

**Low Light**  
Colour shooting in very low light

**Fisheye**  
For a 360° view

**Panoramic**  
For a 180° view

**PTZ**  
Pan/tilt and zoom movement

**Smart Tracking**  
To follow a moving person or vehicle

**Built-in microphone**

**Advanced video analysis**

**Wi-Fi**

**SD-card 250 Gb**  
To ensure a backup of the recording

## Higher performance with Plus cameras

**Deterrent flashing lamp**

**Deterrent audio**  
120dB

**IK10**  
Anti-Vandal protection

## Video classification technology with Plus cameras



Video classification technology uses powerful analysis algorithms that can capture images while shooting targets, which can be processed with in-depth search filters. For example, it offers twelve different filters for people and five for cars.

**Personal characteristics:**

- Gender
- Age

**Clothing:**

- Long/short sleeves
- Long/short trousers
- Skirt
- Top/bottom garment colour

**Accessories:**

- Glasses
- Hat
- Backpack
- Shoulder bag

**Other:**

- Direction of movement

**Car:**

- Type
- Colour
- Brand
- Model
- Year

**Efficient search:**  
quickly searching for the targets concerned makes it possible to exclude people and vehicles that are not relevant, helping users focus more on elements of interest.

## Active deterrence functions with Plus cameras



Stand-alone or integrated **with PTZ** and/or **By-alarm Plus**

The IR illuminator is active in the dark (active deterrence)

White lighting and PTZ tracking are activated when a target is detected

**Siren and lights** are activated to dissuade the target when they enter the critical zone

When the target moves away, the white light turns off and the IR is reactivated (active deterrence)

# Numerous functions for total security and control

The Elvox CCTV system includes solutions that can distinguish people from objects to independently generate accurate alerts and notifications, minimising false alarms and event search times. Functions that can recognise the target even in unfavourable environmental conditions.

**VIDEO ANOMALY (fault or tampering).**

This function can detect an image change anywhere in the surveillance scene, detecting low brightness, excessive brightness, low definition, colour tone dominance, interference and scene changes, and trigger an alarm accordingly.



**ABANDONED OR REMOVED OBJECT.**

This function is able to detect an abandoned or removed object in a pre-defined area within the frame perimeter. When detected the relative alarms are generated. Used to monitor object security, debris flow, illegal parking, illegal billboard posting, building vandalism, etc.



**PERIMETER PROTECTION.**

It activates an alarm or notification when entering or exiting a defined area or crossing one or more configured lines. It can also be configured to discriminate whether it was a person, vehicle, bicycle or motorcycle that entered the area or crossed the line.



**MOTION FLOW COUNTING.**

This counts the number of times a predefined dividing line is crossed by people or vehicles. Certain actions can be set if specific situations occur, such as monitoring the person capacity in a limited area.



**HEAT MAP.**

This serves to monitor and colour areas where people and vehicles are most common and concentrated within the framed perimeter, for example, to monitor road traffic or the favourite route taken by customers through a shop.



**METADATA.**

Powerful video analysis algorithms acquire images by combining shots of people and vehicles with in-depth search filters, such as: gender (man or woman), age, clothing type and colour, accessories worn (glasses, hat, backpack, etc.), car type, colour, brand, model, etc., for an **efficient search**.



**FACIAL RECOGNITION.**

Using powerful algorithms makes it possible to compare and match the faces of the people captured with those saved in the database and create activation rules and custom notifications. This function can also be managed via the By-camera app.



**SMART TRACKING.**

This allows PTZ cameras to automatically track a person or vehicle moving within the frame in order to capture every little detail and movement.



**CORRIDOR FUNCTION.**

This serves to take vertical shots without losing detail inside the scene, ideal for security applications within corridors or narrow lanes.



**BLC: BACK LIGHT Compensation.**

BLC serves to bring the foreground subject to light when shot against the light. The DSP microprocessor will adjust the shutter to obtain a clear and sharp foreground image, leaving the brightest portion of the image overexposed.



**HLC: HIGH LIGHT Compensation.**

This compensates the image by removing areas with too much light, which could create glare that could conceal details.



**WDR AND 3DNR FUNCTIONS.**

These are configurable functions to ensure perfect visibility and well-defined contours by correcting images in the event of strong back lighting, overexposure or darkness.





# Elvox CCTV: advanced video surveillance system with very high resolution, up to 4K.

Our video surveillance systems integrate high-performance products that can guarantee comprehensive control, even in critical areas. Innovative solutions, devised to provide perfect visibility in detail.

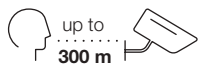


## Versatile range with AHD technology

- Ideal for system renovations, extending existing systems and new installations.
- Covers long distances with no additional accessories, for example 4K resolution can reach up to 300 metres.
- Cameras and XVR with integrated video analysis functions.
- Simple replacement or system expansion. Performance can be upgraded simply by adding or replacing the AHD cameras.



Brings high definition even to existing systems



camera installation with distances up to 300 m



high resolution recording with great detail in real time



night-time recording with colour details



fewer false alarms



## Complete range innovation with IP technology

- The Elvox CCTV IP range is professional and complete.
- Ideal for houses, shops and even more complex situations such as hotels and industries.
- Upgrade your system with the best technology and customise it with just a network cable.
- New integrated video analysis functions, including the ability to distinguish between people and vehicles, with additional details such as gender, clothing, and more. Deterrence with flashing lights and customisable acoustic signalling.



Ideal for new installations and large systems



camera installation with infinite distances via web



4K resolution for recordings with all details and broad field of view



night-time recording with colour details



fewer false alarms

# Connections and security certified to the most common standards.

## ONVIF (OPEN NETWORK VIDEO INTERFACE FORUM).

This is an organisation that certifies all video surveillance equipment that complies with precise standardisation specifications to make all devices interoperable, even if made by different companies. The standards to comply with are related to: IP communication protocol, configuration, remote control, audio-video stream viewing and recording. The complete list of certified products is available at: <https://www.onvif.org/>



## GDPR COMPLIANT NVR/DVR.

The NVRs and DVRs are designed and developed according to the requirements of the GDPR, in full compliance with the European Union regulations on the subject of security. They provide **secure access** protected by an alphanumeric password that can be set with up to 16 characters. As configured, all accesses and system changes **are recorded and stored for a period of 6 months under normal use conditions**. For greater security, from the first access made, a message will remind you to change the default password, and it will continue to be prompted until it is changed for the first time.

Recordings can be to overwrite automatically once 24 hours have lapsed, and without audio recording. The data used to access and view the systems via the **dedicated By-camera app** are encrypted with the highest security levels, while the servers that manage the P2P service are located within the European Community.



# CVM CCTV Manager for centralised video surveillance management.



Sophisticated software for centralising, monitoring, and managing XVR, NVR, and IP Elvox video cameras, for PCs running the Windows operating system. It allows users to monitor up to 64 XVR/NVR devices/IP video cameras over a local network or the internet, with up to 256 video streams, including with mixed technology (AHD-IP) and without router configuration using the P2P service. It supports different user and authorisation levels, a new XVR/NVR graphic interface based on pop-up windows, and can be configured by users to meet specific needs.

### Multi-Window Management

Everything under control: maps, video playback and settings can be managed simultaneously on several monitors.



### Live Viewing

View of up to a maximum of 100 cameras in a single window even from several XVRs/NVRs. The cameras can be organised into logical groups for easier management (e.g. "Perimeter cameras", "Goods unloading area", etc.). The image quality and the frame rate of the primary and secondary stream can be changed to adapt to bandwidth requirements. In the event of an alarm, a full screen pop-up will appear with images from the video camera that triggered the alarm and at the same time the position will be marked on the map, to provide greater detail on location.

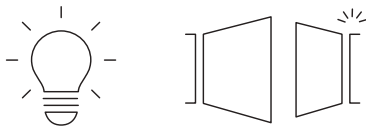
### Graphic Maps

Hierarchical views of multiple maps (in JPG, BMP, PNG, TIF formats, it also supports Google maps) can be created to position cameras and alarm sensors and obtain more details on the location in the event an alarm is triggered.



### Remote control of XVR/NVR outputs

To manually or automatically activate devices remotely, for example, to switch on lights, open entrances, etc.



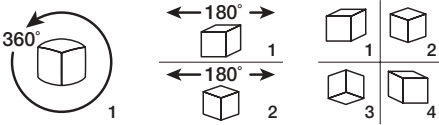
### Two-way Audio

Available with the talk/listen function with XVRs, NVRs, or IP cameras via the IP connection with independent transmission and reception activation.



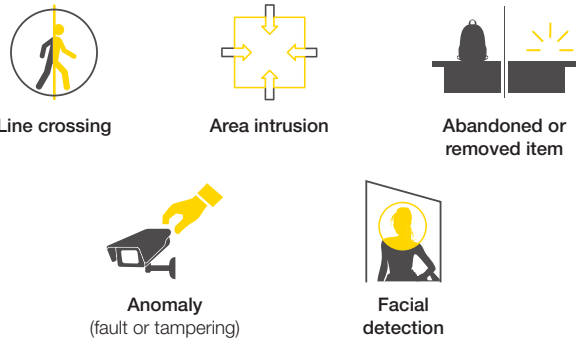
### Compatibility with FishEye Video Cameras

Supports the dewarping function to manage the images typically obtained from a camera with a fisheye lens, for example, 360° view, 180° panoramic view, 360° + 3 PTZ etc.



### Video Analysis Functions

This serves to manage and configure the main video analysis functions for the cameras.



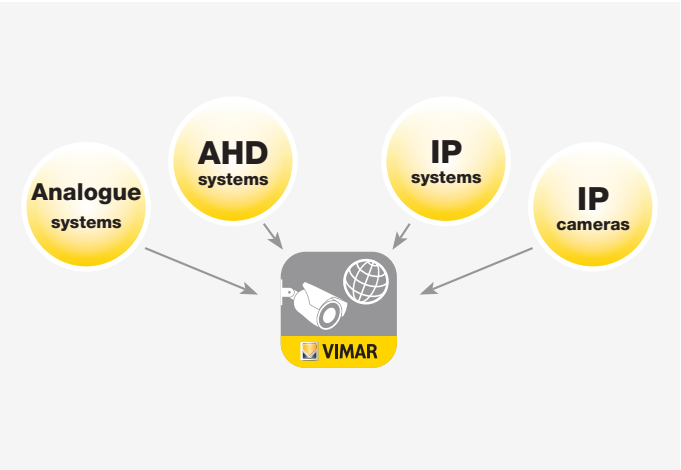


**By-camera app for stand-alone solutions.**  
Simple, high-performance and advanced for controlling AHD and IP systems.

It is compatible with Elvox CCTV video surveillance products with IP and AHD technology, and perfectly suits the needs of both end users and installers.

**Customisable application.**

The app can be used to adjust certain settings on the XVR/NVR video recorders and create favourite screens. Favourite screens can also be created by combining into a single screen video streams originating from several systems with different technologies.



**Vision and control also via the By-me Plus home automation system.**

The By-camera app is available on the By-me Plus home automation system monitor for live viewing and playback, and to use all the main management functions.



**Screen visibility.**

The By-camera app can be used to view the video surveillance screens both vertically and horizontally, for an optimal view of the recordings.



**Fisheye camera view.**

With five different dividable views, the Fisheye camera exploits the full potential of its 360°, bullet, 180°+180°, virtual PTZ and virtual reality views, which are inspired by the latest gaming technologies on smartphones.



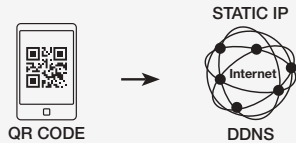
**Instant notifications.**

You can receive real-time event notifications on your smartphone as well as by e-mail.



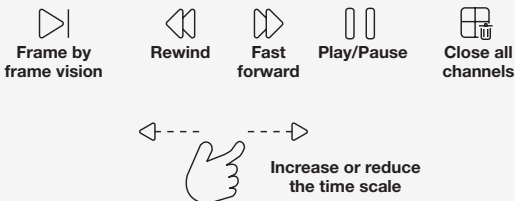
**Simplified connection.**

Immediate remote access to the system without the need to configure the router. Simply scan the QR code with the app to view the video streaming from the cameras. In advanced mode, both the static and dynamic IP address must be entered, and the router has to be configured.



**Simplified search and playback.**

It is easy to navigate through recordings thanks to simple, user-friendly controls, the differentiated time scale per event, and each with a specific colour to make it easier to identify.



By-alarm Plus

37

Elvox CCTV

59

By-alarm Plus

General characteristics	38
Typical systems	42
Product range	48
Absorptions and dimensions	56



By-alarm Plus: burglar alarm system

GENERAL CHARACTERISTICS.

By-alarm Plus is Vimar's professional burglar alarm system, designed to protect the home against break-ins from the outside. The system manages up to 25, 65 and 125 zones divided into areas, each of which can be armed with different profiles (TOTAL, PARTIAL A, PARTIAL B, PARTIAL C, PARTIAL D). It is installed as a stand-alone system with great ease via a wired connection and BUS cable, and can also be extended via radio frequency with a wide range of flush mounting and surface mounting devices. It is quick and easy to install, its quality is guaranteed by the **EN 50131 certification (grade 3**, which can be declassified with software to suit installation requirements) and **IMQ-security systems**. The radio sensors, outdoor radio siren, wired indoor sirens, radio interface and some wired sensors are classified as grade 2.

Advantages.

- By-alarm is a professional **system** with excellent performance, guaranteed by the reliability of being Made in Italy, and features:
- **simple configuration using a PC**: with the utmost versatility, the system can be configured quickly and intuitively from a PC via the dedicated **By-alarm Plus Manager 1.0.0** software or later;
- **expandability at any time**: via BUS cable and/or radio frequency over an innovative high-reliability protocol;
- **remote management**: using a smartphone and tablet and secure GSM and IP connections. The system can be linked to surveillance bodies via the SIA-IP protocol (versions later than 1.0.0);
- **integration with the CCTV video surveillance system**, which allows video check with alarm notifications, followed by direct access to live images from the camera associated with the zone in the alarm state;
- **integration with the View platform and the By-me Plus home automation system**: via a protected IP connection that can be managed from the touch screen or remotely via the **View** app.
- **matching styling**: By-alarm Plus flush mounted devices are available for the Eikon, Arké, Idea (using mounting frame 16723) and Plana series. And in addition:
- **kits with pre-configured devices** (for systems up to 25 and 65 base zones or **with IP connection**).

STANDARD EN-50131.

- **Operation prescribed under EN-50131**  
EN-50131 compliant system operation requires:
  - the inhibition time must be no longer than 90 seconds if the number of access attempts is exceeded (10 incorrect codes on the same keypad). The number of further attempts after the first 10 must be limited to 10 if the system is grade 2, or 1 if it is grade 3;
  - the tamper alarm must not be triggered if there are fewer than 3 incorrect attempts;
  - the re-entry time, in the event of timed zones, cannot exceed 45 seconds;
  - the delay in notifying no mains power must not exceed 60 seconds;
  - introduced delay of alarm signal when this has been generated during the period of switching off; during this delay, only one signalling device is active (e.g.: indoor siren); the delay lasts 30 seconds and only at the end of the delay are the telephone sections activated (PSTN and/or GSM): if the system is switched off before the delay period expires, no telephone signal is sent;
  - in the event of a tamper alarm with the system disarmed, the indoor siren must not be activated. Refer to the installation and software manuals;

- all the indications usually found on the keypad (battery status, ON/OFF status, faults in the telephone line, GSM or power supply etc.) are hidden. This information is then made available on the user menu after access;
- the number of alarm cycles on the same zone before auto-disarming must be between 3 and 10.

- Default parameters

If the EN-50131 parameter is active, the operational procedures adopted are consistent with the requirements of the standard.

- User management

If the EN-50131 parameter is active, the default configuration by the control unit has following limitations:

- the system cannot be armed with open zones; it can be forced by a user with access level 3 (so access to the user menu is required) and the forcing will be recorded in the system log together with the zone disarming that caused blocking upon arming.

System diagram.

The By-alarm Plus system is composed of a 25-zone (03800), 65-zone (03801) or 125-zone (03802) control unit, to which the wired sensors and the indoor and outdoor sirens are connected; the keypad, flush mounting actuators, expansion modules and radio frequency interface are connected to the BUS cable from the control unit.

The system can be wired in either a **star** or **linear in-out** configuration.

The **control panel** is equipped with:

- 10 terminals that can be configured as zones (generic, shutter, inertial, control) or outputs. The number of terminals depends on the size of the control unit (25, 65, 125) and can be obtained using expansion modules 03808 and 03819, keypad terminals 03818 or mini magnetic contact terminals 03833.x.;
- a BUS to which the following can be connected:
  - keypad (03817 or 03818);
  - siren (03826);
  - 5-input/output expansion module (03808 or 03819);
  - BUS isolator/repeater (03822 or 03823);
  - flush mounting actuator (03824);
  - radio frequency interface (03831 or 03832);
  - GSM communicator module (03810 or 3820);
- connection interfaces to install additional modules:
  - voice synthesis module (03813);
  - Ethernet network interface (03812).

The control unit has 1 programmable relay, 2 open collector outputs and 3 auxiliary 12 V outputs:

- the **relay** is typically used to control the self-powered outdoor siren and, where applicable, the indoor siren.

The control unit is configured via the **By-alarm Plus Manager 1.0.0 software** or later. The PC can be connected directly to the control unit by USB-micro USB cable or via network, using the Ethernet connection of the 03812.

By-alarm Plus: burglar alarm system

SYSTEM LOGIC.

The zones to be monitored must be defined according to determined areas for complete, secure coverage. The **area** is a set of system zones, and the control panel can manage up to 5 (for 25 zones), 10 (for 65 zones) or 20 (for 125 zones). Within each area there are **5 connection modes** (shutterings): **TOTAL**, **PARTIAL A**, **PARTIAL B**, **PARTIAL C** and **PARTIAL D**. A system area can be armed in either TOTAL or PARTIAL.. mode; once an area is armed in one of these modes, it can only be disarmed. For example, with a system composed of zones with external sensors (eg. Volumetric garden sensors), zones with perimetral sensors (eg. Window/blind contacts) and zones with internal volumetric sensors (eg. Dual technology sensors), a single area is defined with the three connection modes:

- **TOTAL** = all zones are activated (**total arming**);
- **PARTIAL ..** = activation of zones with external, perimeter and volumetric sensors, depending on the configuration.

Example: arm the area in TOTAL mode when leaving the house. When you are at home and want to protect the outside environment with external and perimeter sensors, arm the area in one of the PARTIAL modes; in order to be able to move freely in the sleeping area at night while the external, perimeter and volumetric sensors in the living area are all active, arm the area in a different PARTIAL mode. In each case, when the area is connected using any mode, it can only be disconnected.

**User management**: each user is recognised by the system through a 4 to 6 figure (grade 3) PIN set during system installation. The operations that can be carried out by each user can be defined in detail (for example arming/disarming), as can the areas in which they can operate. A zone can belong to more than one area. The possibility to create several areas, by defining the integration method (flexible with respect to the zones) and the timely management of user rights, makes for an extremely flexible system.

Several areas can in fact be used to:

- manage parts of the system separately using one single control panel; you can configure 2 areas with different zones and define the users who can control any given area;
- increase the connection modes: more than one area can be defined with the same zones (or zone subsets) and with different connection modes.

SYSTEM CONFIGURATION.

By-alarm Plus Manager 1.0.0

The system can be configured via the By-alarm Plus Manager 1.0.0 software, which is more powerful than the previous version because it allows more customised and precise programming for each device.

Programming takes place in three steps:

- create the system and enter the QR code of the control unit board;
  - add wired peripherals and enter the QR code on the packaging or board;
  - add radio peripherals and enter the QR code on the packaging.
- After these simple steps, the control unit can be configured by setting the many operating parameters for the devices, areas and zones to be protected, inputs, anti-tamper devices, etc. The control unit data writing and reading functions are easy to use. Firmware updates are easy with a simple, user-friendly procedure. The software serves to monitor the system and view the operating condition, batteries status in radio devices and transceiver communication signal level.

By-alarm Plus burglar alarm system gateway (03812).

The gateway serves to connect the By-alarm Plus control unit to the LAN in order to perform all system control, supervision and maintenance operations via the IP/LAN network, Cloud and View Pro app for smartphones, tablets, PCs or IP touch screens. Moreover, the gateway acquires system data a direct connection with the control unit to enable full interaction with the By-me Plus home automation system and therefore management with the **View** app.

BURGLAR ALARM SYSTEM AND CCTV MANAGEMENT.

The **View** app can integrate the By-alarm Plus burglar alarm system with the CCTV video surveillance system for comprehensive monitoring, but also allows them to be added to a larger system such as the By-me Plus home automation system. Alarm notifications, viewing cameras related to the zone in an alarm state, monitoring environments with cameras, all of this is made possible by the interoperability of the systems in the home.

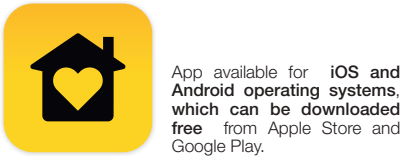


Example screenshots of the **VIEW** app

By-alarm Plus: burglar alarm system

VIEW APP FOR THE END USER.

With the VIEW app, you can manage your spaces via smartphone or tablet. Customising and controlling functions (also navigating by environment), creating scenarios, configuring cameras, receiving video calls and notifications on the status of the home. And with skills provided to leading voice assistant manufacturers,



App available for iOS and Android operating systems, which can be downloaded free from Apple Store and Google Play.

the building responds to your voice, keeping you in touch with your home. Vimar has developed a user-friendly and easily customisable interface with clear icons, which is natively integrated into the 4.3", 7" and 10" **PoE IP touch screens** of the By-me Plus system.



INTEGRATION WITH THE HOME AUTOMATION SYSTEM BY-ME PLUS.

The By-alarm Plus burglar alarm system is integrated into the By-me Plus home automation system by connecting the burglar alarm system control units (03800, 03801 and 03802) to the IP network via the gateway (03812), which uses an encrypted communication protocol with a very high security level, and can provide local and remote control via the **View app**.

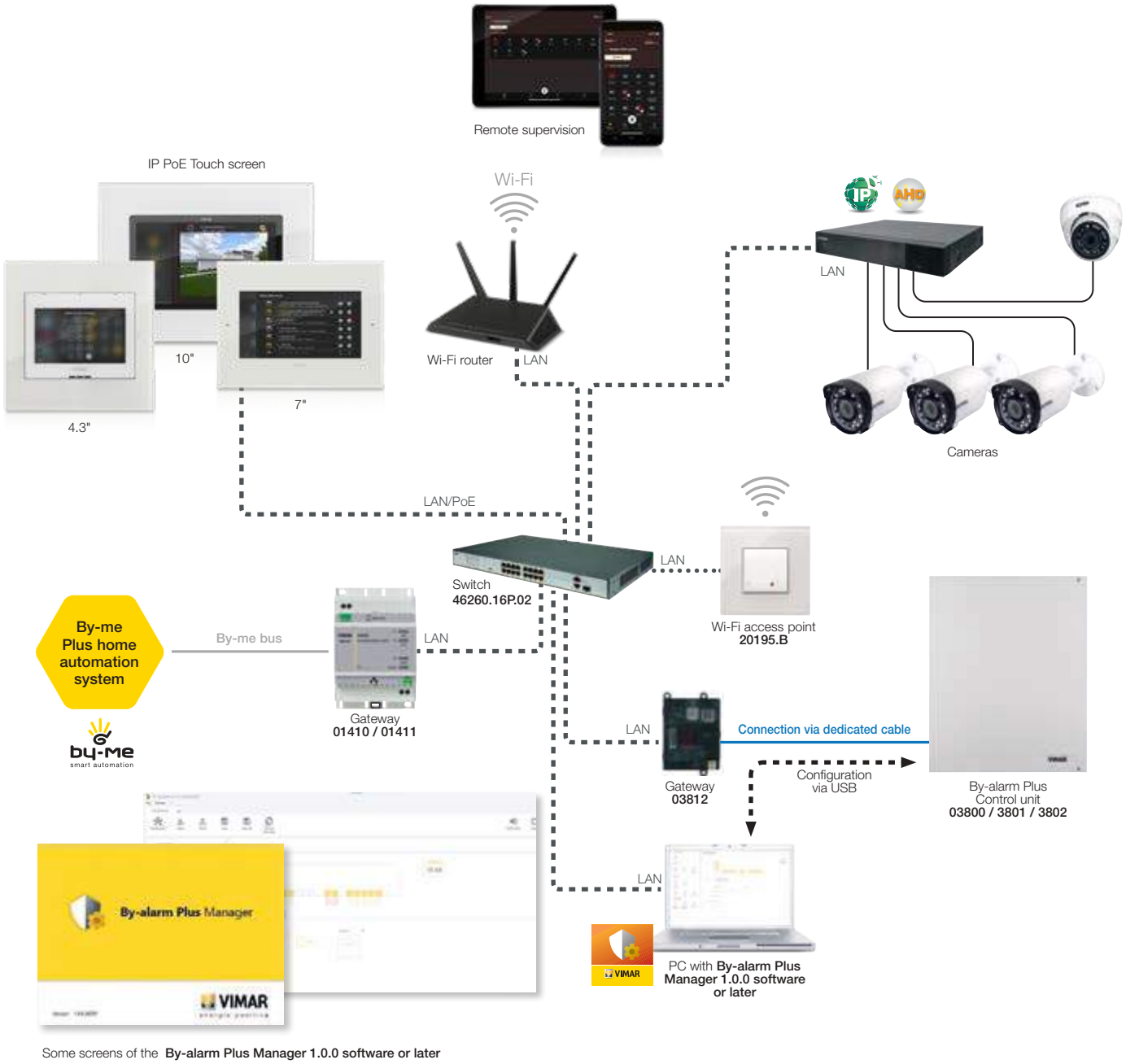
The gateway allows the installer to access the system (also remotely) through a secure communication channel, using the **By-alarm Plus Manager software** version 1.0.0 or later.

- The **integration functions** are:
- control and supervise the By-alarm Plus system from PoE IP touch screens (01425, 01422, 01420) to see the system status (arming/disarming areas based on the rights associated with the user PIN entered, and viewing events/alarms, etc.);
  - activate a By-me Plus scenario when an event occurs (arming, disarming, alarms, etc.) in the burglar alarm system;
  - use of logic programs linked to the status of the areas (full connection, partial connection, alarm);
  - video check with view of all the analogue and IP cameras and those installed on the video door entry risers by the supervisors or mobile devices.



By-alarm Plus: burglar alarm system

BY-ALARM PLUS BURGLAR ALARM SYSTEM INTEGRATED WITH THE BY-ME PLUS SYSTEM AND CCTV.





## By-alarm Plus: burglar alarm system

**A stand-alone, simple and connected solution.**

A simple but high-performance solution able to effectively identify and signal any breaking and entering or undesirable presence. It is very easy to install using a wired connection and BUS cable, and can be controlled remotely/locally from a smartphone via the **View** app.

## WIRED CONNECTION AND BUS CABLE



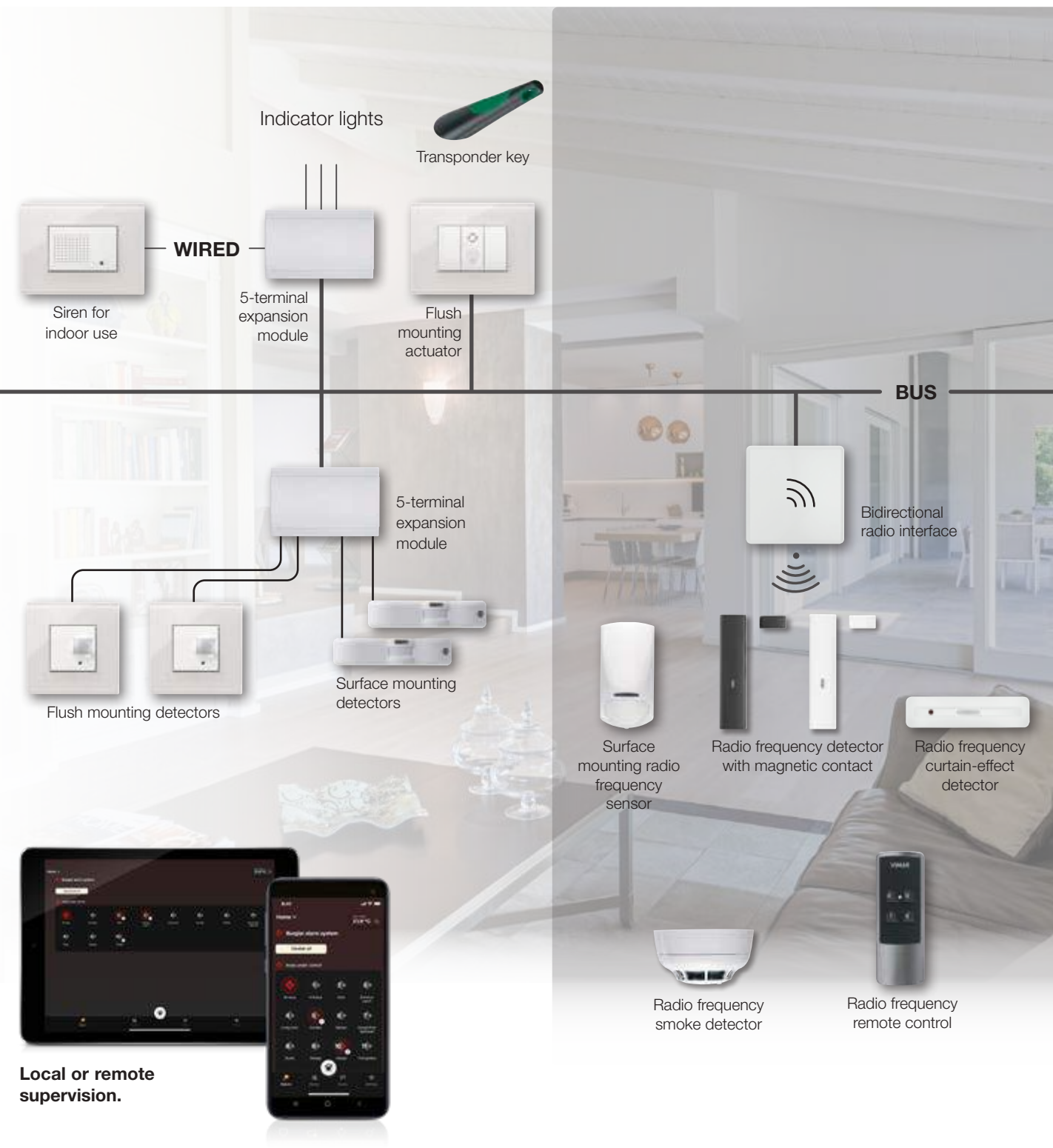
## By-alarm Plus: burglar alarm system

A solution that can be expanded with a bus cable and/or via radio frequency.

The stand-alone solution can be extended to other areas of the building depending on installation needs. Simply extend the BUS cable and/or connect it to a bidirectional radio extension interface for radio frequency control of a range of compatible alarm devices using a highly reliable protocol. In this way it is possible to alarm other zones without carrying out building work.

## EXTENSION VIA BUS CABLE

**AND/OR E.G.VOLTAGE VIA RADIO FREQUENCY**





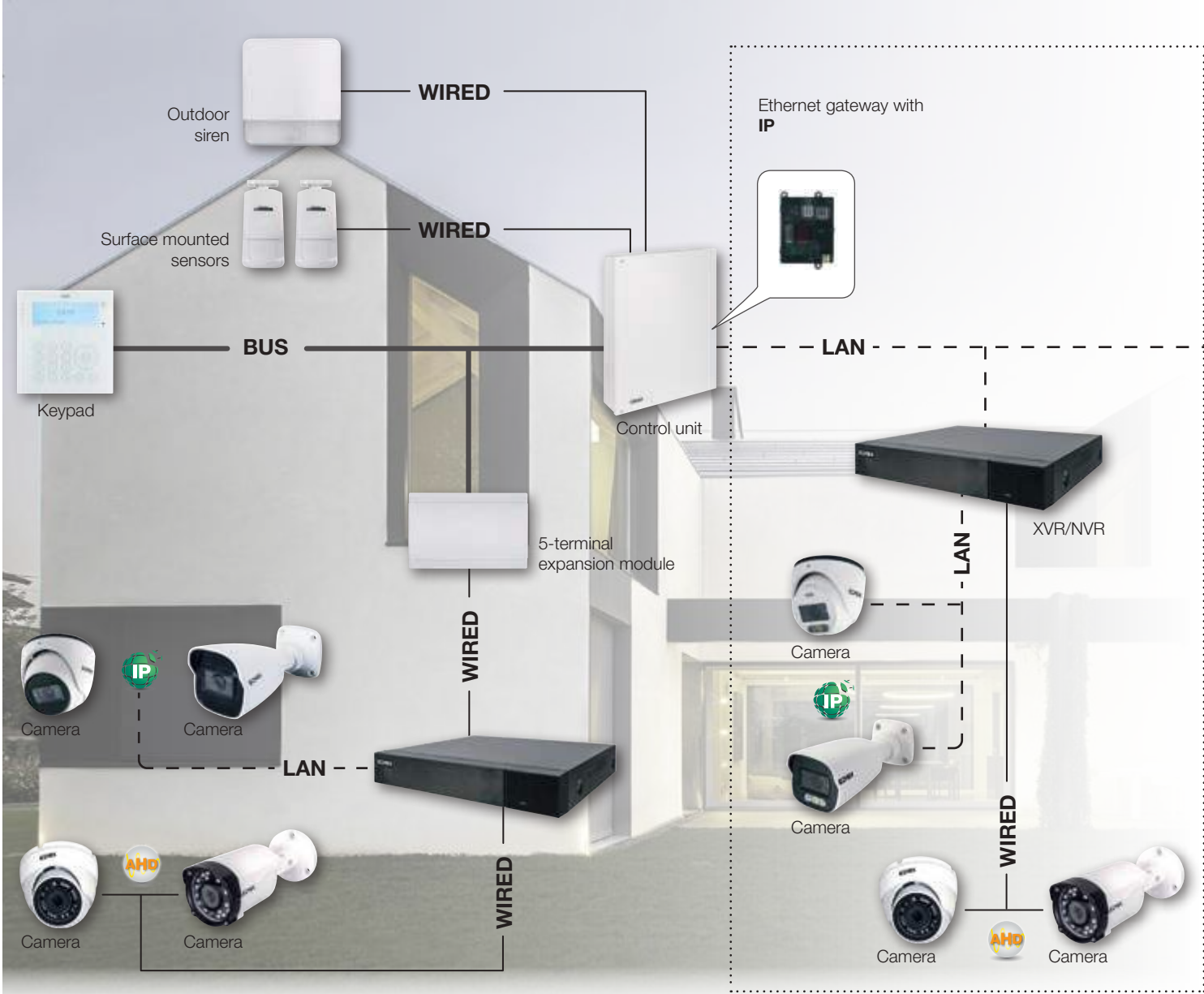
By-alarm Plus: burglar alarm system

An advanced solution, easily linked to the Elvox CCTV system.

By-alarm Plus can be quickly and easily connected to a video surveillance system. Simply connect a BUS cable to the expansion modules and then use a wired connection to connect them to both XVR/NVR and cameras of any Elvox CCTV technology.

BY-ALARM PLUS BURGLAR ALARM SYSTEM

INTEGRATION WITH ELVOX CCTV



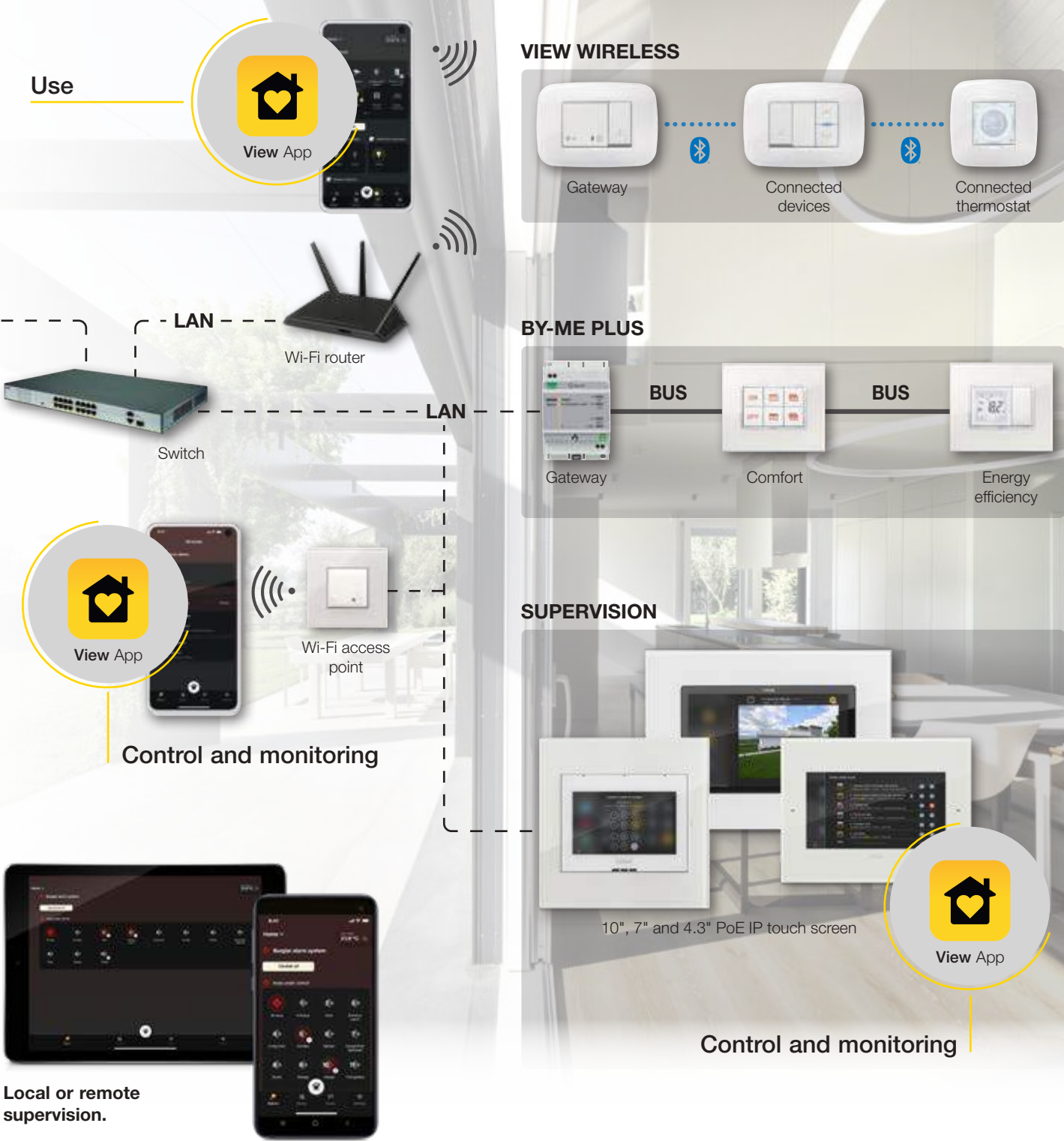
**View App.**  
Allows full system management, monitored and supervised via PoE IP touch screen. Moreover, View Wireless connected devices can also be controlled from a PC, smartphone or tablet.

By-alarm Plus: burglar alarm system

A solution that can be integrated and expanded with View Wireless and By-me Plus via the IP connection.

By-alarm Plus integrates with smart homes or connected homes for greater comfort, efficiency and security, whether you are inside or out. Moreover, installing an IP module in the By-me Plus home automation system ensures that connectivity is secure and the system can be supervised from a touch screen or remotely from a smartphone or tablet via the **View** app.

INTEGRATION WITH VIEW WIRELESS, BY-ME PLUS AND REMOTE SUPERVISION



Local or remote supervision.



By-alarm Plus: burglar alarm system

Example: 80 m² flat with By-alarm Plus burglar alarm system with connected kit.

The example shows a By-alarm Plus burglar alarm system in an 80 m² flat, complete with **connected kit 0K03800.02**. Using kit devices you can:

- manage the entire system from the control unit 03800 (up to 25 zones) with surface mounting enclosure 03814 installed in the technical room, with all system devices connected to it;
- System programming, activation/deactivation and partitioning using the 03817 backlit keypad installed at the entrance;
- The movement detector in the living room and hallway with its dual technology detectors 01720 that, thanks to 2 detection modes with 2 levels of sensitivity, optimise detection ability and prevent false signals;

- The IP/LAN gateway 03812 enables control and management from a smartphone, tablet or PoE IP touch screen supervisor via the **View** app.
- The same type of system can be created using **kit 0K03801.02** that contains control panel 03801, expandable up to 65 zones. The two preconfigured kits can be extended with wired sensors, indoor and outdoor sirens, connectors, keypads and expansion modules, either wired or radio frequency.

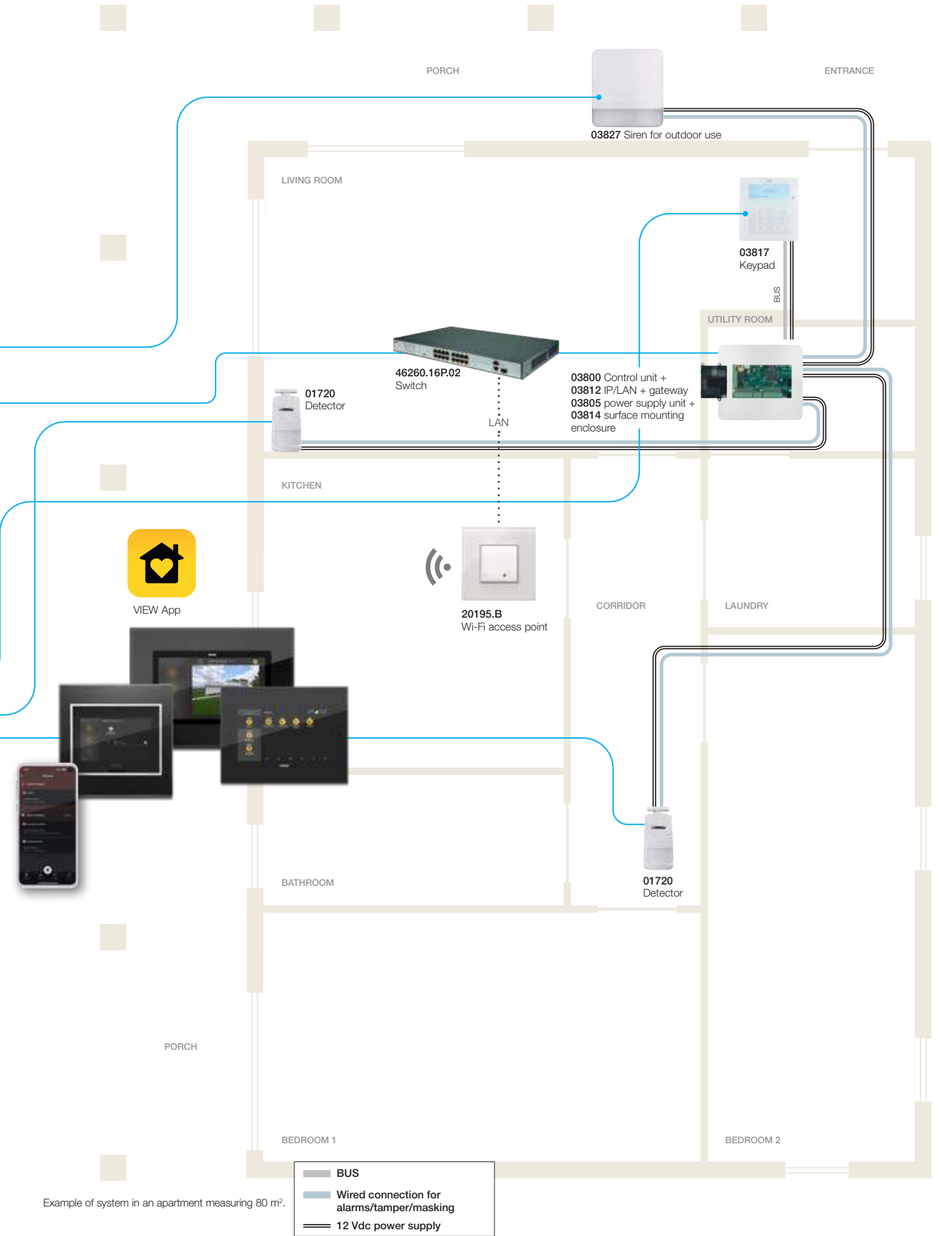


Devices included in the connected kit 0K03800.02*			
Code	Description	Qty	Absorption (mA)
System components			
01720	Surface mounting PET immune detector	2	80
03817	Keypad with display	1	80
03827	Outdoor siren	1	140 (stand-by) or 220
03812	IP/LAN gateway	1	200
			Total power supplied with a 7 Ah battery for powering the system (mA)
03800+03805+03814	25-zone control unit + 230 V~ power supply unit + surface mounting enclosure	1	3200

\* The composition of the kit 0K03801.02 is the same, but the control unit 03801 is expandable up to 65 zones and has 1 GSM communicator board (03810) and keypad with transponder actuator (03818)

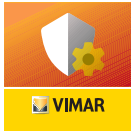
By-alarm Plus: burglar alarm system

Typical system: 80 m² flat with By-alarm Plus burglar alarm system with connected kit.



Example of system in an apartment measuring 80 m².

By-alarm Plus software



By-alarm Plus Manager 1.0.0  
software for system configuration

Kit with IP connection



▲ **0K03800**  
By-alarm Plus control unit kit, **25 zones**, surface mounting, containing:  
• 1 25-zone control unit board (**03800**)  
• 1 230 V – 13 Vdc 3.2 A power supply unit (**03805**)  
• 1 plastic box (**03814**)



▲ **0K03800.01**  
By-alarm Plus control unit kit, **25 zones**, flush mounting, containing:  
• 1 25-zone control unit board (**03800**)  
• 1 230 V – 13 Vdc 3.2 A power supply unit (**03805**)  
• 1 24-module flush mounting switchboard adapter (**03816**)

Preconfigured kits



▲ **0K03800.02**  
By-alarm Plus control unit kit, **25 zones**, surface mounting, containing:  
• 1 25-zone control unit board (**03800**)  
• 1 keypad with display (**03817**)  
• 1 outdoor siren (**03827**)  
• 2 dual technology surface mounting detectors (**01721**)  
• 1 burglar alarm system gateway (**03812**)  
• 1 230 V – 13 Vdc 3.2 A power supply unit (**03805**)  
• 1 plastic box (**03814**)



▲ **0K03801.02**  
By-alarm Plus control unit kit, **65 zones**, surface mounting, containing:  
• 1 65-zone control unit (**03801**)  
• 1 Communicator for sending/receiving text messages (**03820**)  
• 1 keypad with display + transponder (**03818**)  
• 1 outdoor siren (**03827**)  
• 2 dual technology surface mounting detectors (**01721**)  
• 1 burglar alarm system gateway (**03812**)  
• 1 230 V – 13 Vdc 3.2 A power supply unit (**03805**)  
• 2 transponder keys (**03825.Y**)  
• 1 plastic box (**03814**)

Cables



**01732.E**  
By-alarm Plus system cable, 2x0.22 mm<sup>2</sup> with LSZH sheath, CPR Eca class, suitable for installation with Category I power cables (U0 = 400 V), white - 100 m



**01733.E**  
By-alarm Plus system cable, 2 x 0.50 mm<sup>2</sup> + 2 x 0.22 mm<sup>2</sup> with LSZH sheath, CPR Eca class, suitable for installation with Category I power cables (U0 = 400 V), white - 100 m



**01734.E**  
By-alarm Plus system cable, 2 x 0.50 mm<sup>2</sup> + 4 x 0.22 mm<sup>2</sup> with LSZH sheath, CPR Eca class, suitable for installation with Category I power cables (U0 = 400 V), white - 100 m



**01735.E**  
By-alarm Plus system cable, 2 x 0.50 mm<sup>2</sup> + 6 x 0.22 mm<sup>2</sup> with LSZH sheath, CPR Eca class, suitable for installation with Category I power cables (U0 = 400 V), white - 100 m

System components



▲ **03815**  
Surface mounting metal box for 25-, 65- and 125-zone control unit boards.  
Dim. 375x465.6x92.2 mm



▲ **03816**  
24-module switchboard adapter box for flush mounting box V53324 or V53724 and 25- and 65-zone control unit boards.  
Dim. 344.9x444.9 mm



**V53324**  
24-module flush-mounting back box (GW 650 °C) for masonry walls.  
Dim. 316x423x80 mm

**V53724**  
As above, for hollow walls

Control panels



▲ **03801**  
By-alarm Plus control unit expandable to **65 zones**

▲ **03802**  
As above, expandable to **125 zones**

Digital keypad and outdoor siren



▲ **03817**  
Keypad with LCD display, 12 Vdc power supply unit, 23 backlit keys, 5 status LEDs, surface mounting.  
Dim. 140.3x150.3x21.6 mm



▲ **03818**  
Keypad with LCD display and transponder actuator, 2 In/Out zones/terminals, 12 Vdc, 23 backlit keys, 5 status LEDs, surface mounting.  
Dim. 140.3x150.3x21.6 mm



▲ **03826**  
Outdoor siren, control unit connection via BUS, surface mounting.  
Dim. 218x237x54.8 mm

▲ **03827**  
As above, with wired connection to any burglar alarm control unit

System components



▲ **03805**  
230 V~ 50/60 Hz power supply unit with 13.8 Vdc 3.2 A output



▲ **03806**  
230 V~ 50/60 Hz power supply unit with 13.8 Vdc 6.2 A output



▲ **03812**  
Burglar alarm system gateway with IP/LAN for connection to Vimar Cloud, smartphone, tablet and supervision touch screen



▲ **03810**  
GSM communicator module to send/receive text messages, voice messages and alerts with the SIA-IP protocol from version 1.1.0 on



▲ **03820**  
Communicator to send/receive text messages, voice messages and alerts with the SIA-IP protocol from version 1.1.0 on



▲ **03822**  
Isolated interface for BUS signal regeneration

▲ **03823**  
As above, with power supply unit

Expansion and voice synthesis modules for control units



▲ **03808**  
5-terminal input/output expansion board configurable for volt-free contacts



▲ **03819**  
5-terminal input/output expansion module configurable for volt-free contacts



▲ **03809**  
Relay interface board with 1 28 Vdc 7 A changeover contact








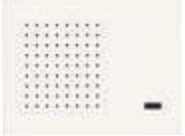



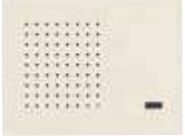

▲ **03813**  
Voice synthesis module for automatic transmission of communications, alarms faults or anomalies. Italian language















SECURITY

By-alarm Plus: burglar alarm system



EIKON	LINEA	ARKÉ	PLANA
Siren for indoor use			
 <b>20496</b> Indoor siren, grey - 3-module. Depth: 37 mm	 ▲ <b>30526.G</b> Indoor siren, black - 3-module. Depth: 34.2 mm	 <b>19496</b> Indoor siren, grey - 3-module. Depth: 36.5 mm	 <b>14496</b> Indoor siren, white - 3-module. Depth: 36 mm
 <b>20496.B</b> Indoor siren, white - 3-module. Depth: 37 mm	 ▲ <b>30526.B</b> Indoor siren, white - 3-module. Depth: 34.2 mm	 <b>19496.B</b> Indoor siren, white - 3-module. Depth: 36.5 mm	 <b>14496.SL</b> Indoor siren, Silver - 3-module. Depth: 36 mm
 <b>20496.N</b> Indoor siren, Next - 3-module. Depth: 37 mm	 ▲ <b>30526.C</b> Indoor siren, beige - 3-module. Depth: 34.2 mm	 <b>19496.M</b> Indoor siren, Metal - 3-module. Depth: 36.5 mm	

Connector/shutter		
 ▲ <b>03824</b> Unit to be combined with Eikon, Linea, Arké and Plana adapters Depth: 35.7 mm	 ▲ <b>03825.G</b> Transponder key for actuator, green	 ▲ <b>03825.Y</b> Transponder key for actuator, yellow

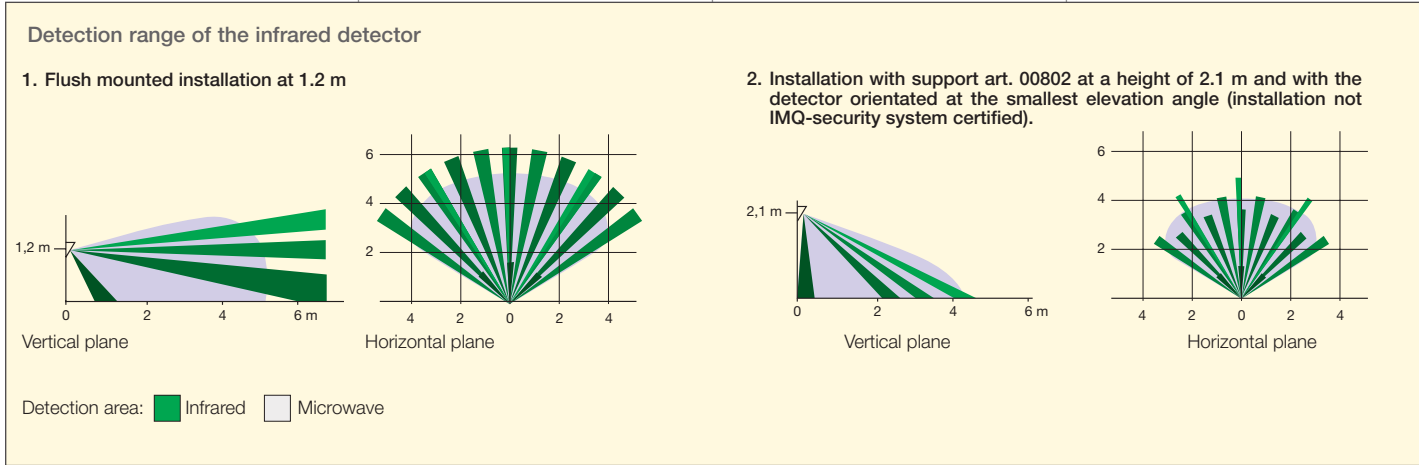
Adapters for actuator/ partitioner								
 ▲ <b>20477</b> grey. 1 module	 ▲ <b>20477.B</b> white. 1 module	 ▲ <b>20477.N</b> Next. 1 module	 ▲ <b>31528.G</b> black. 1 module	 ▲ <b>31528.B</b> white. 1 module	 ▲ <b>31528.C</b> beige. 1 module	 ▲ <b>19477</b> grey. 1 module	 ▲ <b>19477.B</b> white. 1 module	 ▲ <b>19477.M</b> Metal. 1 module
 ▲ <b>14477</b> white. 1 module	 ▲ <b>14477.SL</b> Silver. 1 module							

SECURITY

By-alarm Plus: burglar alarm system



EIKON	LINEA	ARKÉ	PLANA
Passive infrared and microwave presence detector			
 <b>20479</b> Presence detector, grey - 2 modules. Depth: 26.5 mm	 <b>20479.B</b> Presence detector, white - 2 modules. Depth: 26.5 mm	 ▲ <b>30529.G</b> Presence detector, black - 2 modules. Depth: 30.8 mm	 ▲ <b>30529.B</b> Presence detector, white - 2 modules. Depth: 30.8 mm
 <b>20479.N</b> Presence detector, Next - 2 modules. Depth: 26.5 mm	 ▲ <b>30529.C</b> Presence detector, beige - 2 modules. Depth: 30.8 mm	 <b>19479</b> Presence detector, grey - 2 modules. Depth: 26.2 mm	 <b>19479.B</b> Presence detector, white - 2 modules. Depth: 26.2 mm
		 <b>14479</b> Presence detector, white - 2 modules. Depth: 25.5 mm	 <b>14479.SL</b> Presence detector, Silver - 2 modules. Depth: 25.5 mm
		 <b>19479.M</b> Presence detector, Metal - 2 modules. Depth: 26.2 mm	

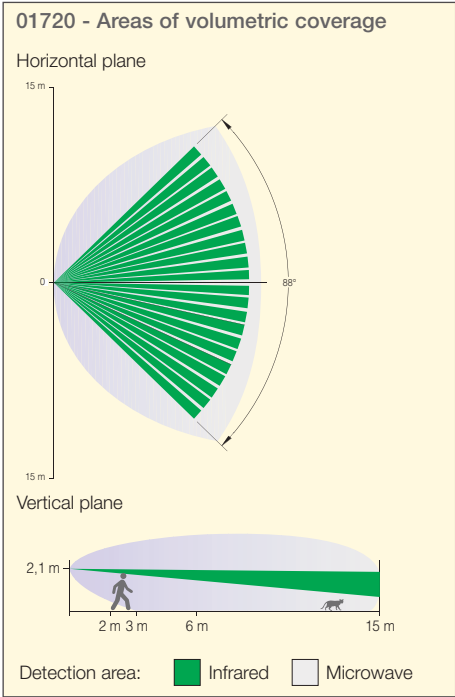


Common accessories for Eikon, Arké and Plana								
 <b>00802.14</b> Orientable support for presence detector, grey	 <b>00805.14</b> Flush mounting adapter for orientable support, grey	 <b>00800.14</b> Surface mounting frame for orientable support, grey	 <b>00802</b> Orientable support for presence detector, white	 <b>00805</b> Flush mounting adapter for orientable support, white	 <b>00800</b> Surface mounting frame for orientable support, white	 <b>00802.20</b> Orientable support for presence detector, Next/Silver	 <b>00805.20</b> Flush mounting adapter for orientable support, Next/Silver	 <b>00800.20</b> Surface mounting frame for orientable support, Next/Silver

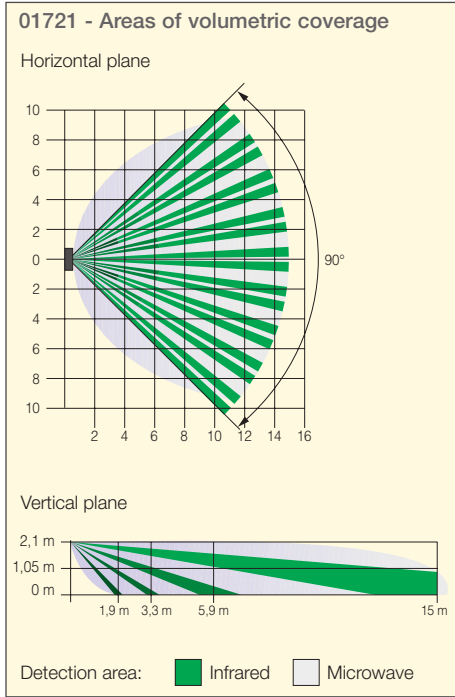
Indoor and surface mounting detectors



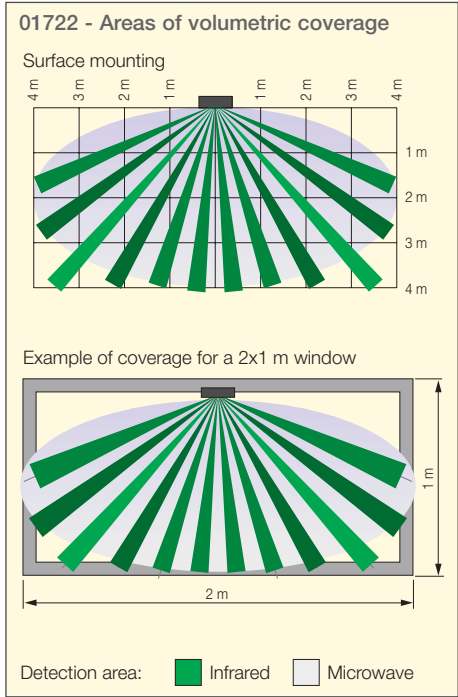
**01720**  
Dual technology passive infrared and microwave detector, PET immune, surface mounting



**01721**  
Dual technology passive infrared and microwave detector, anti-masking and anti-crawl, surface mounting



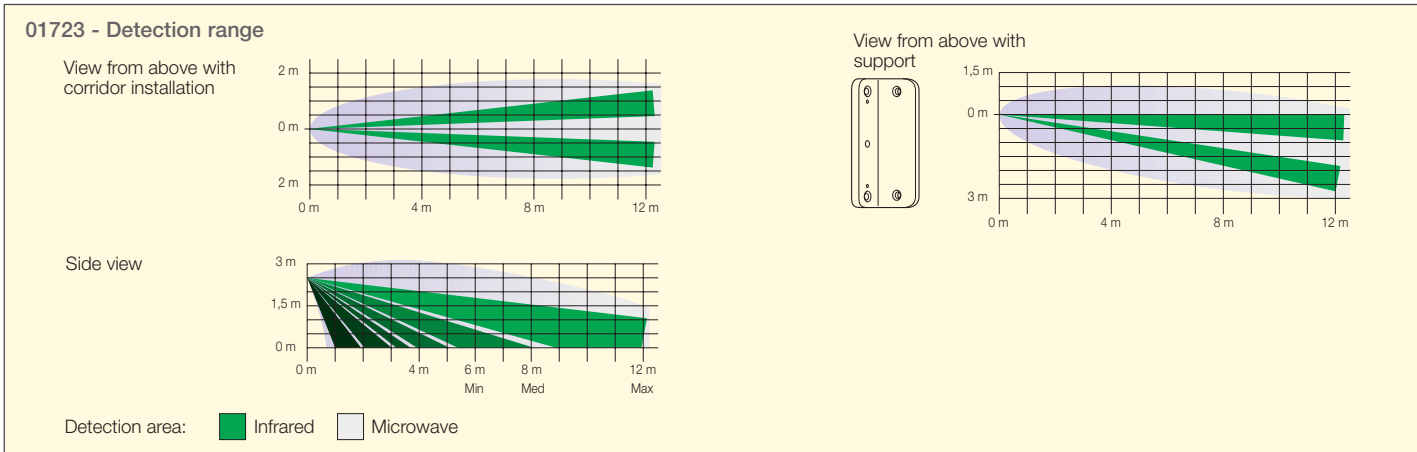
**01722**  
Dual technology curtain-effect detector, for entrances and windows, surface mounting



Outdoor and surface mounting detectors



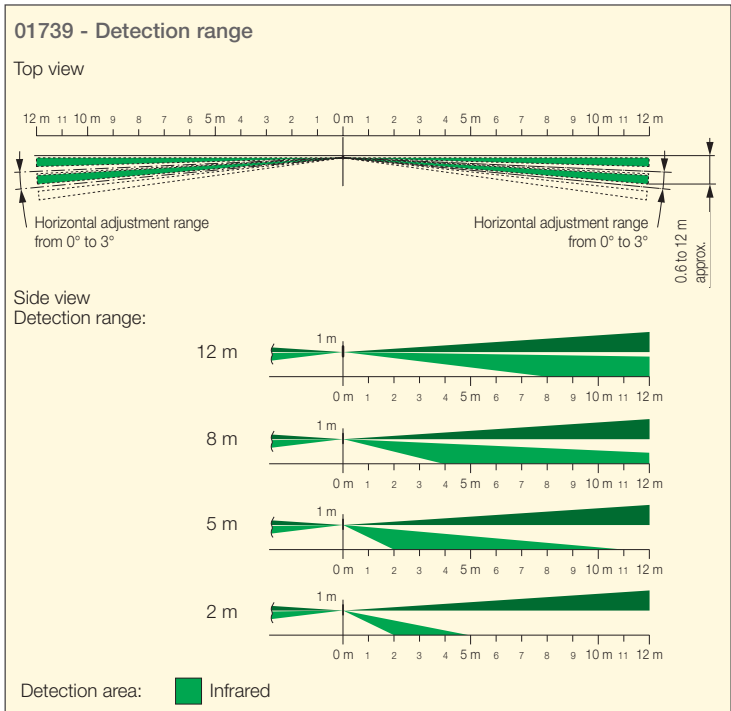
**01723**  
Dual technology passive infrared and microwave curtain-effect detector, IP54 for outdoor entrances and windows, surface mounting



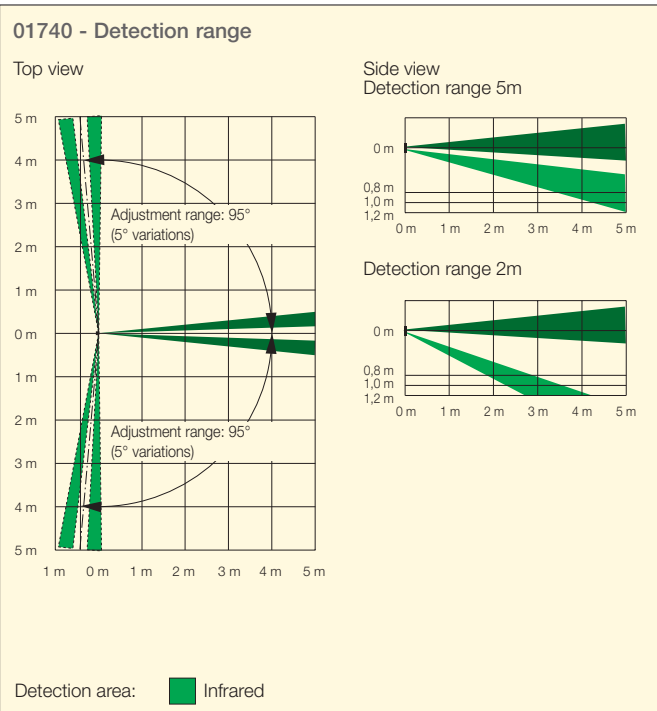
Outdoor and surface mounting detectors



**01739**  
Curtain-effect detector, 12 meters per side, passive infrared, IP55, PET immune, surface mounting



**01740**  
Curtain-effect detector, 2/5 meters for protecting entrances, PET immune, surface mounting



Detection devices for burglar alarm systems and technical alarms



**01724**  
Water detector for protection against flooding, floor mounting



**01823**  
Magnetic contact in a metal enclosure for visible installation



**01824**  
Magnetic contact in a metal enclosure for up-and-over doors



**01825**  
Electromechanical rope sensor for shutters and roller shutters



**01826**  
Electromechanical inertial contact for windows and doors



**01820**  
Magnetic contact for flush mounting installation



**01821**  
Metal magnetic contact for flush mounting installation



**01822**  
Magnetic contact for visible installation



Extension kit, 868 MHz radio frequency



- ▲ 0K03831  
By-alarm Plus radio extension kit, surface mounting, containing:
- 1 RF interface (03832),
  - 2 infrared detector (03836),
  - 2 white RF magnetic contacts (03833.B),
  - 2 surface mounting RF remote controls (03839)

Expansion modules for 868 MHz radio frequency



- ▲ 03831  
Transceiver, BUS connection to the control unit, 2 antennas for horizontal and vertical polarisation with antenna-diversity, plastic enclosure
- ▲ 03832  
Transceiver board, BUS connection to the control unit, 2 antennas for horizontal and vertical polarisation with antenna-diversity, plastic enclosure
- ▲ 03840  
Repeater to extend radio coverage, 2 antennas for horizontal and vertical polarisation with antenna-diversity, plastic enclosure

Remote control and outdoor siren, 868 MHz radio frequency



- ▲ 03839  
Remote control with 4 buttons, power supply with 3 V CR2032 lithium battery included
- ▲ 03830  
Outdoor siren, control unit connection via radio, surface mounting. Dim. 218x237x54.8 mm
- ▲ 00907  
Non-rechargeable 3.6 V 14500 mA lithium battery for radio frequency siren

Detection devices for burglar alarm systems and technical alarms, 868 MHz radio frequency

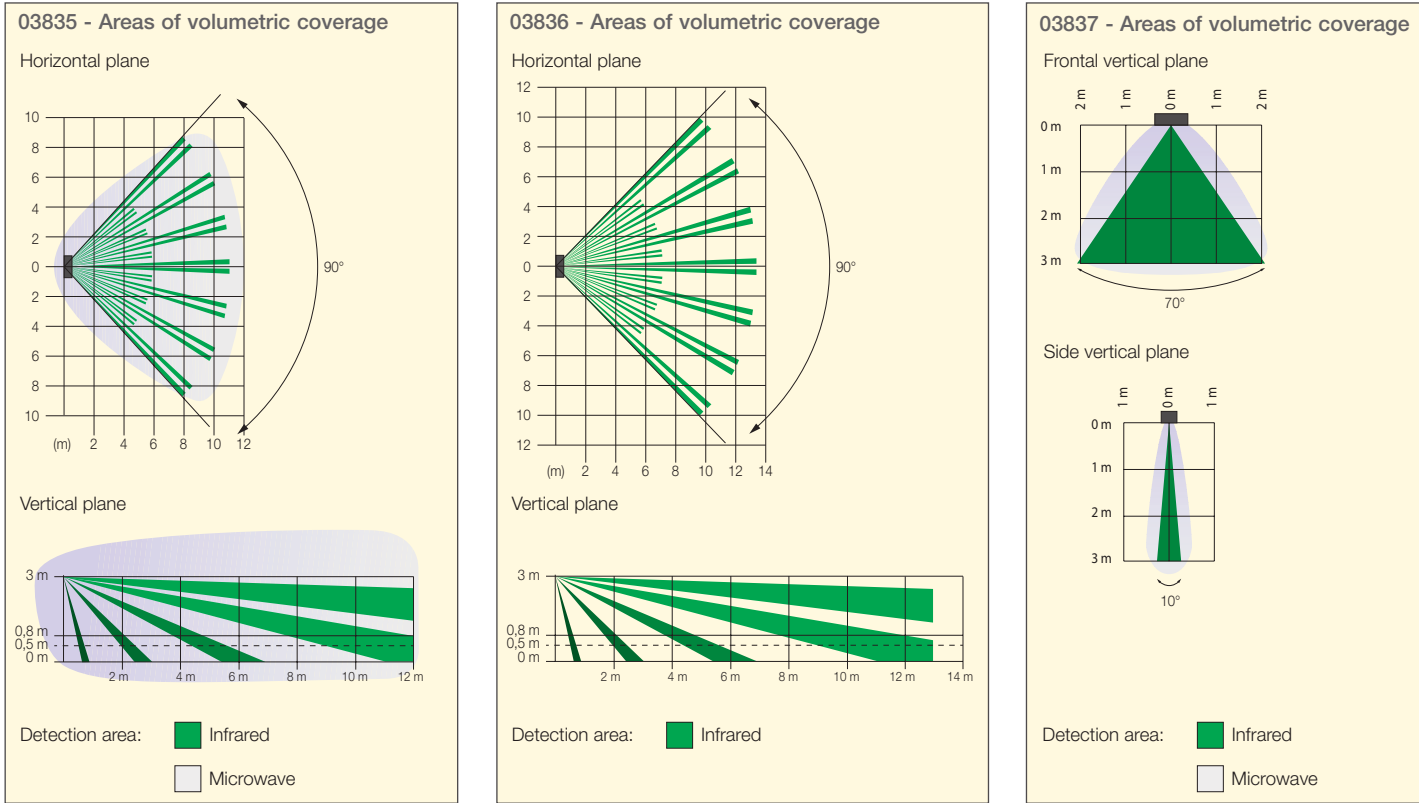


- ▲ 03833.B  
Vertical and horizontal magnetic contact for doors and windows, power supply with 1 x 1.5V AA alkaline battery included, white
- ▲ 03833.M  
Vertical and horizontal magnetic contact for doors and windows, power supply with 1 x 1.5V AA alkaline battery included, brown
- ▲ 03834  
Magnetic contact and shock/tilt sensor, power supply with 1 CR2 3V lithium battery, white

Surface mounting indoor detectors, 868 MHz radio frequency



- ▲ 03835  
Dual technology passive infrared + microwave detector, PET immune, power supply with 3V CR17450 lithium battery included, white
- ▲ 03836  
Passive infrared detector, PET immune, power supply with 3V CR17450 lithium battery included, white
- ▲ 03837  
Curtain-effect detector, power supply with 3 V CR17450 lithium battery included





Absorptions and dimensions

BUS devices			
Code	Description	Power input	Dimensions
03817	LED keypad with display	80 mA	140.3x150.3x21.6 mm (LxHxD)
03818	LED keypad with with display and transponder actuator		
03826	BUS outdoor siren	20 mA (stand-by) - 150 mA with internal battery charging	218x237x54.8 mm (LxHxD)
03808	5-terminal input/output expansion board	20 mA	58.9x106.9x22 mm (LxHxD)
03819	5-terminal input/output expansion module	20 mA	80x126x27 (LxHxD)
03809	1-relay interface board	30 mA	46x34x21.9 mm (LxHxD)
03810	GSM communicator module	70 mA (stand-by) - 540 mA max (during call)	108x67x23.5 mm (LxHxD)
03820	GSM communicator module, protected enclosure	70 mA (stand-by) - 540 mA max (during call)	110.5x193.9x29 mm (LxHxD)
03813	Voice synthesis module	20 mA	20x20x11.7 mm (LxHxD)
03824	1-module actuator for EIKON, LINEA, ARKÉ and PLANA	20 mA (without key) - 50 mA (with key)	22.4x43x35.7 mm (LxHxD)
03831	Radio frequency transceiver interface	30 mA to 50 mA	126.8x126.8x34.9 mm (LxHxD)
03832	Radio frequency transceiver interface board	30 mA to 50 mA	102.6x122.6x21.5 mm (LxHxD)
03840	Radio repeater	30 mA to 50 mA - Buffer battery: 4 x 1.5 V AA alkaline batteries	126.8x126.8x34.9 mm (LxHxD)

Stand-alone devices

Code	Description	Power supply absorptions and voltages	Dimensions
03827	Wired outdoor siren	140 mA (stand-by) - 220 mA (during operation), 13.8 Vdc Battery that can be accommodated: 12 Vdc 2.1 Ah flammability class UL94-HB	218x237x54.8 mm (LxHxD)
20496...	EIKON indoor siren	18 mA (stand-by) - 110 mA (during acoustic alarm signalling), 12 Vdc	67.3x49x46.5 mm (LxHxD)
30526...	LINEA indoor siren		67.2x49x47.9 mm (LxHxD)
19496...	ARKÉ indoor siren		67.2x49x47.9 mm (LxHxD)
14496...	PLANA indoor siren		67.3x49x46.5 mm (LxHxD)
20479...	EIKON IR+microwave presence detector	15 mA (stand-by) - 28 mA max, 12 Vdc	44.8x49x43.5 mm (LxHxD)
30529	LINEA IR+microwave presence detector		44.7x52.8x43.6 mm (LxHxD)
19479...	ARKÉ IR+microwave presence detector		44.7x49x43.5 mm (LxHxD)
14479...	PLANA IR+microwave presence detector		44.8x49x43.5 mm (LxHxD)
01720	Surface mounting PET immune presence detector	30 mA (stand-by) - 40 mA max, 12 Vdc	60.9x115.9x93.3 mm (LxHxD)
01721	Surface mounting anti-crawl presence detector		
01722	Surface mounting curtain-effect presence detector	40 mA max, 12 Vdc	110x26x31 mm (LxHxD)
01723	Surface mounting curtain-effect presence detector, IP54	60 mA (stand-by) - 70 mA max, 12 Vdc	71.5x155.7x103 mm (LxHxD)
01739	Surface mounting curtain-effect presence detector, 12 m+12 m, PET immune, IP55	38 mA max, 10–28 Vdc	55x233x69 mm (LxHxD)
01740	Surface mounting curtain-effect presence detector, PET immune	20 mA max, 9.5–18 Vdc	35.155x42.5 mm (LxHxD)
01724	Floor water detector	3.5 mA (rated) - 5 mA max, 12 Vdc rated (5 – 16 Vdc)	51.7x16x12 mm (LxHxD)
03822	BUS isolator/repeater	110 mA, 9.5–15 Vdc	126.1x80.1x27 mm (LxHxD)
03823	BUS isolator/repeater with power supply unit	130 mA, 9.5–15 Vdc	171.3x80.1x27.5 mm (LxHxD)
03812	IP/LAN (Ethernet) gateway	200 mA max, power supply voltage from control unit	107.2x73.7x24.8 mm (LxHxD)

Radio frequency devices

Code	Description	Power supply	Dimensions
03839	RF remote control	3 V CR2032 lithium battery (average battery life 3 years)	31.35x86.4x15.2 mm (LxHxD)
03830	RF outdoor siren	See the device instructions sheet	218x237x54.8 mm (LxHxD)
03833.B 03833.M	RF magnetic detector for doors and windows	LR6 1.5 V AA alkaline battery (average battery life 4 years)	Sensor 25.8x109.6x26.5 mm (LxHxD) Magnet 12.9x26.1 mm (LxH)
03834	Magnetic contact and shock/tilt sensor	CR2 3 V lithium battery	Sensor 35x58x23 mm (LxHxD) Magnet 13x40x14 mm (LxHxD)
03835	RF passive infrared + microwave presence detector	3 V CR17450 lithium battery (average battery life 3 years)	60.2x120.5x47.6 mm (LxHxD)
03836	RF passive infrared presence detector	3 V CR17450 lithium battery (average battery life 3 years)	60.2x120.5x47.6 mm (LxHxD)
03837	RF curtain-effect detector	3 V CR17450 lithium battery (average battery life 3 years)	138.1x35.2x34.3 mm (LxHxD)



Control unit specifications

Control unit	03800	03801	03801
--------------	-------	-------	-------

Standard specifications			
Entry/exit zones	10 (expandable to 25)	10 (expandable to 65)	10 (expandable to 125)
	With single, double or triple balancing (with sensor masking recognition)		
Programmable relay outputs	1		
Programmable 12 V outputs	3		
Open-collector outputs	2		
Areas	5 max	10 max	20 max
	Inputs that can be associated with areas in order to manage 20 different sub-systems		
Control unit programming	From PC and By-alarm Plus Manager 1.0.0 software (for Windows operating systems). Using a USB connection from either a local or remote network via the gateway <b>03812</b>		
Codes	1 installer code		
	50 user codes	100 user codes	200 user codes
Activation	5 arming/activation modes for each area (TOTAL, PARTIAL A, PARTIAL B, ... PARTIAL D). Areas can be armed/disarmed on recognising the user PIN, transponder key or remote control, or from a text message. Programmable time switch for arming/disarming areas		
Clock	Weekly clock with a total of 32 operations per week for automation/auto-arming with exception management. Possibility of switching on and off, code and keypad restriction and macro activation. Timed and status-based activation of active outputs		
Telephone alerts	Voice synthesis module <b>03813</b> with voice protocol for automatic communication in order to send all alarm and control panel functions to private users. Communicator <b>03810</b> or <b>03820</b> to send all the protocols over a GSM network and all control unit alarm and control functions via text messages.		
Radio system	868 MHz transceivers <b>03831</b> or <b>03832</b> with antenna-diversity (2 antennas) and frequency-hopping. OTA (Over the Air) updates.		
Connection distance between the control unit inputs and sensors/contacts	100 m max		
BUS length	600 m max (sum of all laid Bus cable sections). 600 m is possible with the isolator/repeater module <b>03822</b> or <b>03823</b>		
Power supply	230 V 50/60 Hz with power supply unit <b>03805</b> for 13 Vdc 3.2 A or <b>03806</b> for 13 Vdc 6.2 A		
Ambient conditions	-10° C/+40° C, maximum humidity 75% non-condensing		
Enclosure	In plastic box <b>03814</b> for surface mounting (supplied in kit versions). In metal box <b>03815</b> for surface mounting. In switchboard adapter box <b>03816</b> for flush mounting in conjunction with box <b>V53324</b> or <b>V53724</b>		
Security class	IMQ Grade 3 certification for the wired system. IMQ Grade 2 certification for the radio system. (EN 50131-3, EN 50131-6).		
Environment class	II (EN 50131-3, EN 50131-6)		

Additional components	
Control keypad	Up to 20 keypads <b>03817</b> or <b>03818</b> (version with transponder) Can be connected to the BUS, with direct indication via power supply, system and fault LEDs
Sirens	Up to 5 <b>03826</b> can be connected to the BUS or 1 wired siren <b>03927</b> or 1 radio outdoor siren <b>03830</b>
Connectors	Up to 20 actuators <b>03824</b> can be connected to the BUS Up to 50 <b>03819</b> or <b>03808</b> with 5 terminals and single, double or triple balancing (with sensor masking recognition) can be connected to the BUS.
Expansions	Up to 5 radio frequency transceivers <b>03831</b> or <b>03832</b> can be connected to the BUS. Up to 4 repeaters <b>03840</b> can be connected in cascade to extend the radio signal
Relay interface	<b>03809</b> to convert an open-collector output from an expansion or control unit zone into a volt-free contact
Communicators	1 <b>03810</b> or <b>03820</b>
Isolators	5 <b>03822</b> or <b>03823</b>
Batteries	12 Vdc 7 Ah lead battery for installation in box <b>03814</b> , <b>03815</b> or <b>03816</b> . 12 Vdc 18 Ah lead battery for installation in box <b>03815</b>



Index

By-alarm Plus

37

Elvox CCTV

59

Elvox CCTV

Typical systems	60
IP product range	62
AHD product range	85

CCTV system supervision with CVM CCTV Manager software.

OPERATING SYSTEM REQUIREMENTS

- Windows 7 SP1 32 bit/64 bit Professional/Ultimate or above
- Windows 8 32 bit/64 bit Professional or above
- Windows 10 32 bit/64 bit Professional or above

HARDWARE REQUIREMENTS

- Intel(R) Core (TM) i5 7500 3.0Ghz CPU or above
- 4 GB DDR3 memory or above
- HDD SATA 500 GB or above
- Independent graphics board;  
NV GT430, AMD HD6570 or higher, GDDR5 512 MB or higher
- 1000 Mbps network card or above

INSTALLATION EXAMPLE

For up to **64 devices** (XVR/NVR/IP cameras) and up to **256 video streams**. With the new **H.265+** and **H.265S** video compression standards, archiving capacity has increased for the same storage and video signal transmission smoothness. NVR integrate the **combined video analysis events** function, which generates alarms by combining two different simultaneous events that can be selected from the video analysis functions and alarm input (physical contact) to limit false alarms.



Integration with By-me Plus.

The **CCTV** system with both **analogue AHD** or **digital IP technology** integrates natively into the Vimar View IoT Smart Systems platform, without the need to install a specific gateway (except for the XVR for AHD cameras). For stand-alone IP cameras (not connected to XVR/NVR) and for IP/AHD cameras connected to NVR/XVR, integration makes it possible to view live streaming. These functions are available both locally and remotely via the View app. To use all the main DVR/NVR management functions on touch screens, the **dedicated CCTV function** can be activated from the customise/application management menu available for By-camera mobile devices. Integration is not just sharing the user interface, but also applies to the various subsystems, for instance the cameras in the CCTV system can be associated with zones of the By-alarm Plus burglar alarm system (where present) to allow video checking in the event of an alarm. This ensures all-round comfort.

INSTALLATION EXAMPLE

Integrating the By-me Plus system with Elvox CCTV





SECURITY

ELVEX CCTV : video surveillance system



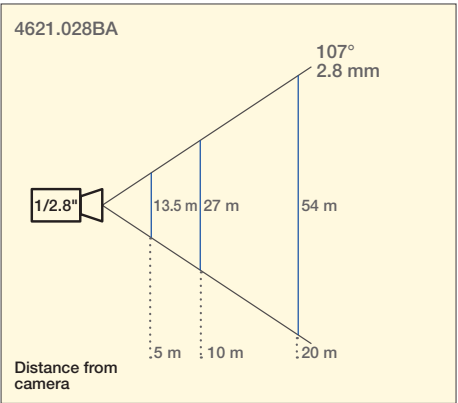
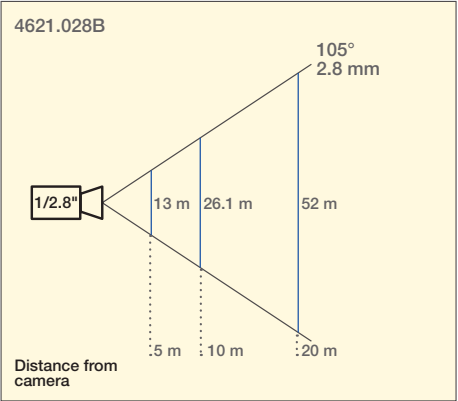
Bullet IP 2 Mpx cameras



Code	Δ 4621.028B	▲ 4621.028BA
Sensor	1/2.8" CMOS	1/2.8" CMOS
Resolution	2 Mpx - 1920 x 1080	2 Mpx - 1920 x 1080
Sensitivity	0.0035 lux @F1.2, AGC ON; 0 lux (IR LED ON)	0.008 lux @F1.6, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, MJPEG	H.264, H.265, H.265+, MJPEG
Day & night	ICR	ICR
Lens	2.8 mm @ F1.6 (105°)	2.8 mm @ F1.6 (107°)
Main frame rate	25 Fps (1920 x 1080) 25 Fps (1280 x 720)	25 Fps (1920 x 1080) 25 Fps (1280 x 720)
Secondary frame rate	25 Fps (704 x 576) 25 Fps (480 x 240) 25 Fps (352 x 288)	25 Fps (704 x 576) 25 Fps (640 x 480) 25 Fps (352 x 288)
Bit Rate	64 Kbps ~ 6 Mbps	128 Kbps ~ 4 Mbps
SD card	Yes, not included (128 GB max)	Yes, not included (256GB max)
In/Out audio	1/0	1/0
In/Out alarm	0/0	0/0
CVBS output video	No	No
Intelligent video analysis	Video anomaly, line crossing, abandoned or removed object, area intrusion	Video anomaly, line crossing, abandoned or removed object, area intrusion
Functions	3D-DNR, motion, HLC, BLC	3D-DNR, motion, HLC, BLC
WDR	Digital WDR (90 dB)	Digital WDR (90 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge, Firefox, Chrome and Safari
Smart IR	20 – 30 m	20 – 30 m
IP degree	IP67	IP67
Temperature range	-30°C / +60°C	-30°C / +60°C
Power supply/ consumptions	12 Vdc 290 mA, 3.5 W IEEE802.3af PoE	12 Vdc 370 mA, 4.5 W IEEE802.3af PoE
Dimensions mm	75 x 75 x 168	75 x 75 x 168
Weight (g)	435	435
Pole bracket	46917.005	46917.005
Contact box	46922.040	46922.040
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range



SECURITY

ELVEX CCTV : video surveillance system



Bullet IP 2 Mpx cameras



Code	Δ 4621.2812B	▲ 4621.2812BA	Δ 46216.212BL
Sensor	1/2.9" CMOS	1/2.8" CMOS	1/2.8" CMOS, high sensitivity
Resolution	2 Mpx - 1920 x 1080	2 Mpx - 1920 x 1080	2 Mpx - 1920 x 1080
Sensitivity	0.0035 lux @F1.2, AGC ON; 0 lux (IR LED ON)	0.008 lux @F1.6, AGC ON; 0 lux (IR LED ON)	Colour 0.002 lux @F1.2, AGC ON B&N 0.0002 lux @ F1.2, AGC ON
Video compression	H.264, H.265, MJPEG	H.264, H.265, H.265+, MJPEG	H.264, MJPEG
Day & night	ICR	ICR	ICR
Lens	2.8–12 mm @ F1.4 (88°– 35°)	2.8–12 mm @ F1.6 (102°– 33°)	2.8–12 mm @ F1.4 (96°– 35°)
Main frame rate	25 Fps (1920 x 1080) 25 Fps (1280 x 720)	25 Fps (1920 x 1080) 25 Fps (1280 x 720)	25 Fps (1920 x 1080) 25 Fps (1280 x 720)
Secondary frame rate	25 Fps (704 x 576) 25 Fps (480 x 240) 25 Fps (352 x 288)	25 Fps (704 x 576) 25 Fps (640 x 480) 25 Fps (352 x 288)	25 Fps (704 x 576) 25 Fps (480 x 240) 25 Fps (352 x 288)
Bit Rate	64 Kbps ~ 6 Mbps	128 kbps ~ 4 Mbs	128 kbps ~ 6 Mbs
SD card	Yes, not included (128 GB max)	Yes, not included (256GB max)	No
In/Out audio	1/0	1/0	0/0
In/Out alarm	0/0	0/0	0/0
CVBS output video	No	No	No
Intelligent video analysis	No	Video anomaly, line crossing, abandoned or removed object, area intrusion	No
Functions	3D-DNR, motion, HLC, BLC	3D-DNR, motion, HLC, BLC	3D-DNR, motion
WDR	Digital WDR (90 dB)	Digital WDR (90 dB)	Digital D-WDR (90 dB)
ROI	8	8	8
Zone Privacy	4	4	4
Supported browsers	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge, Firefox, Chrome and Safari	Internet Explorer, Edge (IE compatibility)
Smart IR	30 – 50 m	20 – 30 m	20 – 30 m
IP degree	IP67	IP67	IP66
Temperature range	-30°C / +60°C	-30°C / +60°C	-10°C ~ +50°C
Power supply/ consumptions	12 Vdc 450 mA, 5.4 W IEEE802.3af PoE	12 Vdc 580 mA, 7 W IEEE802.3af PoE	12 Vdc 500 mA, 6 W IEEE802.3af PoE
Dimensions mm	81 x 81 x 218	81 x 81 x 218	87 x 87 x 219
Weight (g)	680	680	635
Pole bracket	46917.005	46917.005	46917.002
Contact box	46922.040	46922.040	46922.014
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Low Light camera (46216.212BL)



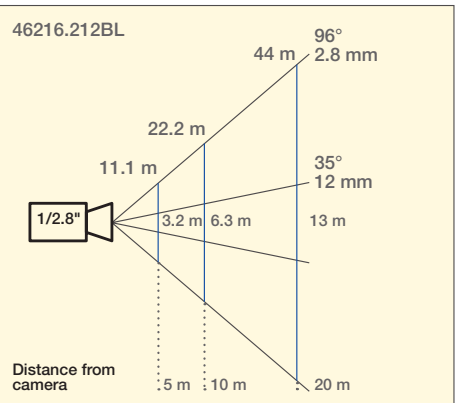
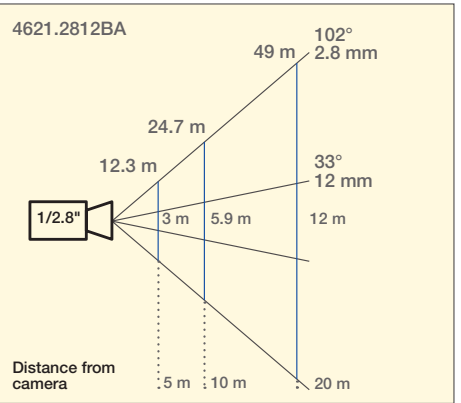
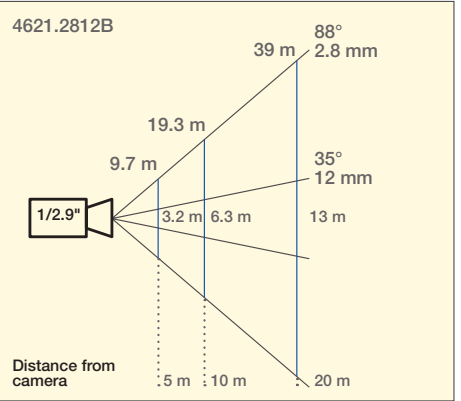
Shot by standard camera



Shot by Low Light camera

Low Light cameras feature high light sensitivity and can capture clear images and colours, even in low light conditions.

Shooting range





Dome 2 Mpx IP cameras



Built-in microphone



Built-in microphone

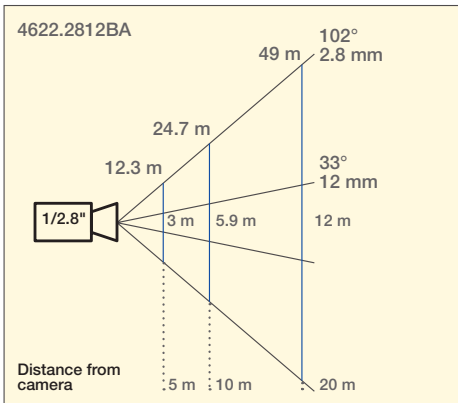
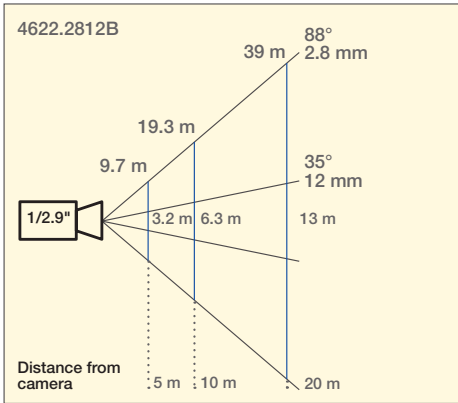
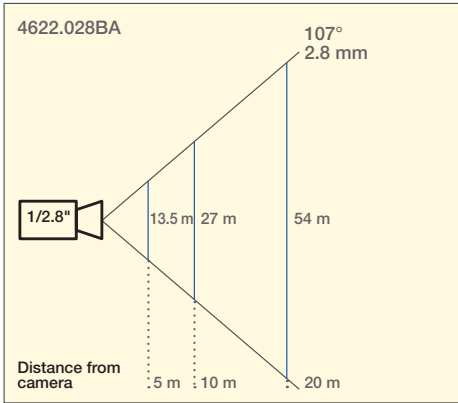


Built-in microphone

Code	▲ 4622.028BA	Δ 4622.2812B	▲ 4622.2812BA
Sensor	1/2.8" CMOS	1/2.9" CMOS	1/2.8" CMOS
Resolution	<b>2 Mpx</b> - 1920 x 1080	<b>2 Mpx</b> - 1920 x 1080	<b>2 Mpx</b> - 1920 x 1080
Sensitivity	0.008 lux @F1.6, AGC ON; 0 lux (IR LED ON)	<b>0.0035 lux @F1.2</b> , AGC ON; 0 lux (IR LED ON)	<b>0.008 lux @F1.6</b> , AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, MJPEG	H.264, H.265, H.265+, MJPEG
Day & night	ICR	ICR	ICR
Lens	2.8 mm @ F1.6 (107°)	<b>2.8–12 mm @ F1.4 (88°–35°)</b>	<b>2.8–12 mm @ F1.4 (102°–33°)</b>
Main frame rate	25 Fps (1920 x 1080) 25 Fps (1280 x 720)	25 Fps (1920 x 1080) 25 Fps (1280 x 720)	25 Fps (1920 x 1080) 25 Fps (1280 x 720)
Secondary frame rate	25 Fps (704 x 576) 25 Fps (640 x 480) 25 Fps (352 x 288)	25 Fps (704 x 576) 25 Fps (480 x 240) 25 Fps (352 x 288)	25 Fps (704 x 576) 25 Fps (640 x 480) 25 Fps (352 x 288)
Bit Rate	128 Kbps ~ 4 Mbps	64 Kbps ~ 6 Mbps	128 Kbps ~ 4 Mbps
SD card	<b>Yes, not included (256GB max)</b>	<b>Yes, not included (128 GB max)</b>	<b>Yes, not included (256GB max)</b>
In/Out audio	<b>1/0 (built-in MIC)</b>	<b>1/0 (built-in MIC)</b>	<b>1/0 (built-in MIC)</b>
In/Out alarm	0/0	0/0	0/0
CVBS output video	No	No	No
Intelligent video analysis	<b>Video anomaly, line crossing, abandoned or removed object, area intrusion</b>	No	<b>Video anomaly, line crossing, abandoned or removed object, area intrusion</b>
Functions	3D-DNR, motion, HLC, BLC	3D-DNR, motion, HLC, BLC	3D-DNR, motion, HLC, BLC
WDR	Digital WDR (90 dB)	Digital WDR (90 dB)	Digital WDR (90 dB)
ROI	8	8	8
Zone Privacy	4	4	4
Supported browsers	Internet Explorer, Edge, Firefox, Chrome and Safari	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge, Firefox, Chrome and Safari
Smart IR	20 – 30 m	<b>30 – 50 m</b>	20 – 30 m
IP degree	IP67	IP67	IP67
Temperature range	<b>-30°C / +60°C</b>	<b>-30°C / +60°C</b>	<b>-30°C / +60°C</b>
Power supply/ consumptions	12 Vdc 370 mA, 4.5 W IEEE802.3af PoE	12 Vdc 450 mA, 5.4 W IEEE802.3af PoE	12 Vdc 580 mA, 7 W IEEE802.3af PoE
Dimensions mm	ø 95 x 83	ø 112 x 100	ø 112 x 100
Weight (g)	430	625	625
Contact box	46922.040	46922.041	46922.041
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range



Bullet IP 4 Mpx cameras



7-22 mm

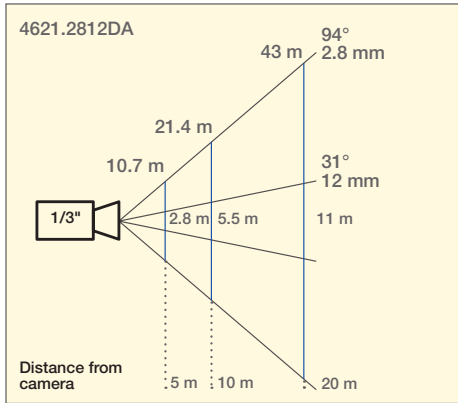
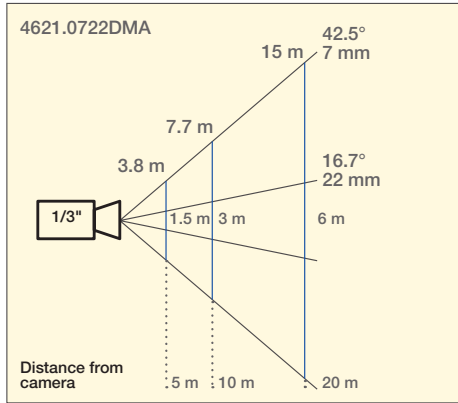


Code	4621.0722DMA	▲ 4621.2812DA
Sensor	1/3" CMOS	1/3" CMOS
Resolution	<b>4 Mpx</b> - 2592 x 1520	<b>4 Mpx</b> - 2560 x 1440
Sensitivity	<b>0.005 lux @F1.6</b> , AGC ON; 0 lux (IR LED ON)	<b>0.005 lux @F1.6</b> , AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, MJPEG	H.264, H.265, MJPEG
Day & night	ICR	ICR
Lens	<b>7–22 mm @ F1.6 (42.5°– 16.7°)</b>	<b>2.8–12 mm @ F1.4 (94°– 31°)</b>
Main frame rate	25 Fps (2592 x 1520) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720) <b>50 Fps (1920 x 1080) **</b> <b>50 Fps (1280 x 720) **</b>	25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)
Secondary frame rate	25 Fps (1280 x 720) 25 Fps (D1) 25 Fps (CIF) 25 Fps (480 x 240)	25 Fps (1280 x 720) 25 Fps (704 x 576) 25 Fps (640 x 480) 25 Fps (352 x 288)
Bit Rate	64 Kbps ~ 8 Mbps	64 Kbps ~ 8 Mbps
SD card	<b>Yes, not included (128 GB max)</b>	<b>Yes, not included (256GB max)</b>
In/Out audio	<b>1/1</b>	<b>1/0</b>
In/Out alarm	<b>1/1</b>	<b>1/1</b>
CVBS output video	<b>Yes</b>	No
Intelligent video analysis	<b>Video anomaly, line crossing, area intrusion, enter area, exit area, vehicle/ person count, face recognition</b>	<b>Video anomaly, line crossing, abandoned or removed object, area intrusion</b>
Functions	3D-DNR, motion, HLC, BLC	3D-DNR, motion, HLC, BLC, corridor
WDR	Real WDR (120 dB)	Real WDR (120 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge, Firefox, Chrome and Safari
Smart IR	<b>70 – 100 m</b>	30 – 50 m
IP degree	IP67	IP67
Temperature range	<b>-30°C / +60°C</b>	<b>-30°C / +60°C</b>
Power supply/ consumptions	12 Vdc 840 mA, 10 W IEEE802.3af PoE	12 Vdc 460 mA, 5.5 W IEEE802.3af PoE
Dimensions mm	100 x 89 x 280	81 x 81 x 218
Weight (g)	1,115	680
Pole bracket	46917.005	46917.005
Contact box	46922.041	46922.040
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as a camera for IP video door entry systems.

\*\* HFR mode: capture every detail, can record to SD card with 2 Mpx resolution and high frame rates, up to 50 fps, ideal function for still images.

Shooting range





SECURITY

ELVEX CCTV : video surveillance system



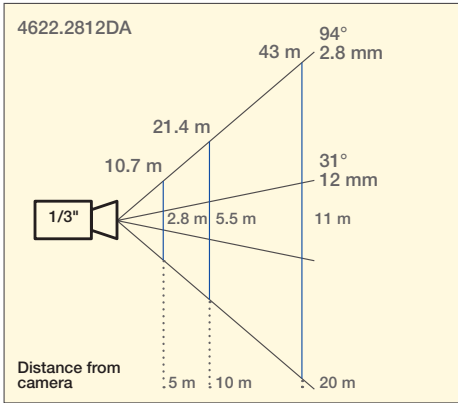
Dome 4 Mpx IP cameras



Code	▲ 4622.2812DA
Sensor	1/3" CMOS
Resolution	4 Mpx - 2560 x 1440
Sensitivity	0.005 lux @F1.6, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, MJPEG
Day & night	ICR
Lens	2.8–12 mm @ F1.4 (94°– 31°)
Main frame rate	25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)
Secondary frame rate	25 Fps (1280 x 720) 25 Fps (704 x 576) 25 Fps (640 x 480) 25 Fps (352 x 288)
Bit Rate	64 Kbps ~ 8 Mbps
SD card	Yes, not included (256GB max)
In/Out audio	1/0 (built-in MIC)
In/Out alarm	0/0
CVBS output video	No
Intelligent video analysis	Video anomaly, line crossing, abandoned or removed object, area intrusion
Functions	3D-DNR, motion, HLC, BLC, corridor
WDR	Real WDR (120 dB)
ROI	8
Zone Privacy	4
Supported browsers	Internet Explorer, Edge, Firefox, Chrome and Safari
Smart IR	30 – 50 m
IP degree	IP67
Temperature range	-30°C / +60°C
Power supply/ consumptions	12 Vdc 460 mA, 5.5 W IEEE802.3af PoE
Dimensions mm	ø 112 x 100
Weight (g)	625
Contact box	46922.041
Notes	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range



SECURITY

ELVEX CCTV : video surveillance system



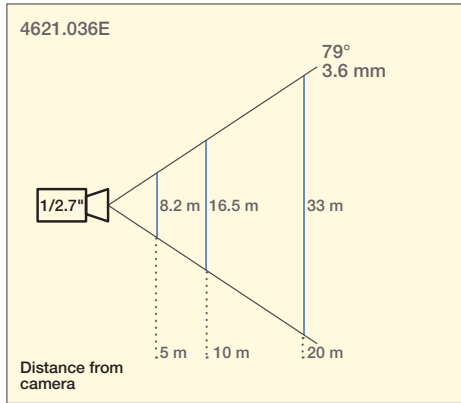
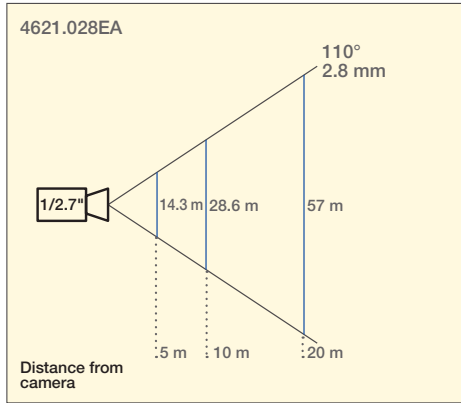
Bullet IP 5 Mpx cameras



Code	▲ 4621.028EA	Δ 4621.036E
Sensor	1/2.7" CMOS	1/2.7" CMOS
Resolution	5 Mpx - 2880 x 1620	5 Mpx - 2592 x 1944
Sensitivity	0.007 lux @F1.6, AGC ON; 0 lux (IR LED ON)	0.0085 lux @F1.2, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, MJPEG
Day & night	ICR	ICR
Lens	2.8 mm @F1.6 (110°)	3.6 mm @F2.0 (79°)
Main frame rate	20 Fps (2880 x 1620) 25 Fps (2560 x 1440) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)	20 Fps (2592 x 1944) 25 Fps (2560 x 1440) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)
Secondary frame rate	25 Fps (1280 x 720) 25 Fps (704 x 576) 25 Fps (640 x 480) 25 Fps (352 x 288)	12 Fps (1280 x 720) 25 Fps (D1) 25 Fps (CIF) 25 Fps (480 x 240)
Bit Rate	64 Kbps ~ 8 Mbps	64 Kbps ~ 5 Mbps
SD card	Yes, not included (256GB max)	No
In/Out audio	1/0 (built-in MIC)	0/0
In/Out alarm	0/0	0/0
CVBS output video	No	No
Intelligent video analysis	Video anomaly, line crossing, abandoned or removed object, area intrusion	No
Functions	3D-DNR, motion, HLC, BLC, corridor	3D-DNR, motion, HLC, BLC, defog
WDR	Real WDR (120 dB)	WDR (90 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge, Firefox, Chrome and Safari	Internet Explorer, Edge (IE compatibility)
Smart IR	20 – 30 m	20 – 30 m
IP degree	IP67	IP67
Temperature range	-30°C / +60°C	-30°C / +60°C
Power supply/ consumptions	12 Vdc 370 mA, 4.5 W IEEE802.3af PoE	12 Vdc 300 mA, 3.6 W IEEE802.3af PoE
Dimensions mm	75 x 75 x 168	75 x 75 x 168
Weight (g)	435	405
Pole bracket	46917.005	46917.005
Contact box	46922.040	46922.040
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range





Bullet IP 5 Mpx cameras

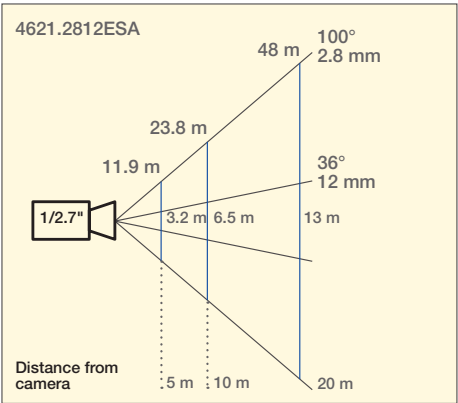
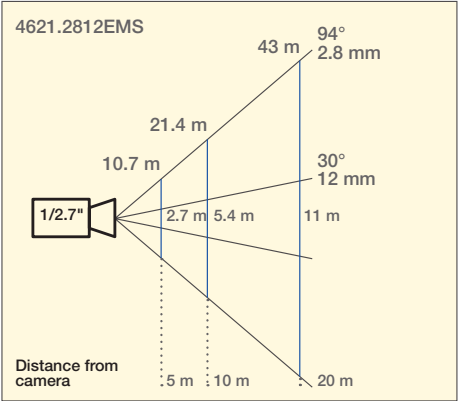


Built-in microphone

Code	Δ 4621.2812EMS motorised	▲ 4621.2812ESA motorised
Sensor	1/2.7" CMOS	1/2.7" CMOS
Resolution	5 Mpx - 2592 x 1944	5 Mpx - 2880 x 1620
Sensitivity	0.0085 lux @F1.2, AGC ON; 0 lux (IR LED ON)	0.007 lux @F1.6, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, MJPEG	H.264, H.265, H.265+, MJPEG
Day & night	ICR	ICR
Lens	2.8–12 mm @ F1.4 (94° – 30°) Motorised	2.8–12 mm @ F1.6 (100° – 36°) Motorised
Main frame rate	20 Fps (2592 x 1944) 25 Fps (2560 x 1440) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)	20 Fps (2880 x 1620) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)
Secondary frame rate	12 Fps (1280 x 720) 25 Fps (D1) 25 Fps (CIF) 25 Fps (480 x 240)	25 Fps (1280 x 720) 25 Fps (704 x 576) 25 Fps (640 x 480) 25 Fps (352 x 288)
Bit Rate	64 Kbps ~ 5 Mbps	64 Kbps ~ 8 Mbps
SD card	No	Yes, not included (256GB max)
In/Out audio	0/0	1/0 (built-in MIC)
In/Out alarm	0/0	0/0
CVBS output video	No	No
Intelligent video analysis	No	Video anomaly, line crossing, abandoned or removed object, area intrusion
Functions	3D-DNR, motion, HLC, BLC, defog	3D-DNR, motion, HLC, BLC, corridor
WDR	WDR (90 dB)	Real WDR (120 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge, Firefox, Chrome and Safari
Smart IR	30 – 50 m	30 – 50 m
IP degree	IP67	IP67
Temperature range	-30°C / +60°C	-30°C / +60°C
Power supply/ consumptions	12 Vdc 630 mA, 7.6 W IEEE802.3af PoE	12 Vdc 600 mA, 7.2 W IEEE802.3af PoE
Dimensions mm	81 x 81 x 218	81 x 81 x 218
Weight (g)	640	640
Pole bracket	46917.005	46917.005
Contact box	46922.040	46922.040
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range



Bullet IP 5 Mpx cameras



Metadata

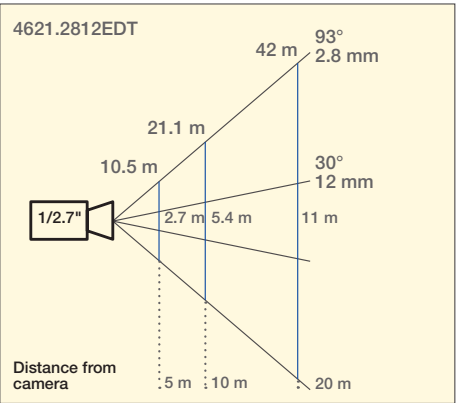
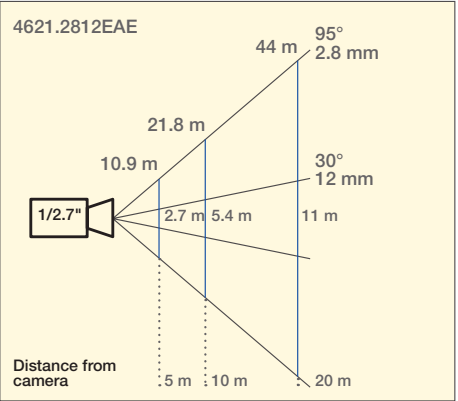
Deterrent effect

Code	▲ 4621.2812EAE motorised	▲ 4621.2812EDT motorised
Sensor	1/2.7" CMOS	1/2.7" CMOS
Resolution	5 Mpx - 2592 x 1944	5 Mpx - 2592 x 1944
Sensitivity	0.02 lux @F1.6, AGC ON; 0 lux (IR LED ON)	0.008 lux @F1.4, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, H.265+, H.265S, MJPEG
Day & night	ICR	ICR
Lens	2.8–12 mm @ F1.6 (95° – 30°) Motorised	2.8–12 mm @ F1.6 (93° – 30°) Motorised
Main frame rate	25 Fps (2592 x 1944) 25 Fps (2592 x 1520) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720) 50 Fps (1920 x 1080) ** 50 Fps (1280 x 720) **	25 Fps (2592 x 1944) 25 Fps (2592 x 1520) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720) 50 Fps (1920 x 1080) ** 50 Fps (1280 x 720) **
Secondary frame rate	25 Fps (1280 x 720) 25 Fps (704 x 576)	25 Fps (1280 x 720) 25 Fps (704 x 576)
Bit Rate	64 Kbps ~ 8 Mbps	64 Kbps ~ 9 Mbps
SD card	Yes, not included (256GB max)	Yes, not included (256GB max)
In/Out audio	1/1	1/1 (built-in SPEAKER)
In/Out alarm	1/1	1/1
CVBS output video	Yes	No
Intelligent video analysis	Video anomaly, line crossing, abandoned or removed object, area intrusion, enter area, exit area, vehicle/person count, heat map, metadata, face recognition	Video anomaly, line crossing, area intrusion, enter area, exit area
Functions	3D-DNR, motion, HLC, BLC, defog, corridor	3D-DNR, motion, HLC, BLC, defog, corridor
WDR	Real WDR (120 dB)	Real WDR (120 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge, Firefox, Chrome and Safari	Internet Explorer, Edge (IE compatibility)
Smart IR	50 – 70 m	50 – 70 m
IP degree	IP67	IP66
Temperature range	-30°C / +60°C	-30°C / +60°C
Power supply/ consumptions	12 Vdc 700 mA, 8.4 W IEEE802.3af PoE	12 Vdc 900 mA, 11 W IEEE802.3af PoE
Dimensions mm	100 x 89 x 280	81 x 81 x 218
Pole bracket	46917.005	46917.005
Contact box	46922.041	46922.040
Weight (g)	1115	680
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

\*\* HFR mode: capture every detail, can record to SD card with 2 Mpx resolution and high frame rates, up to 50 fps, ideal function for still images.

Shooting range





SECURITY

ELVEX CCTV : video surveillance system



Mini Dome IP 5 Mpx cameras



Built-in microphone  
Metadata

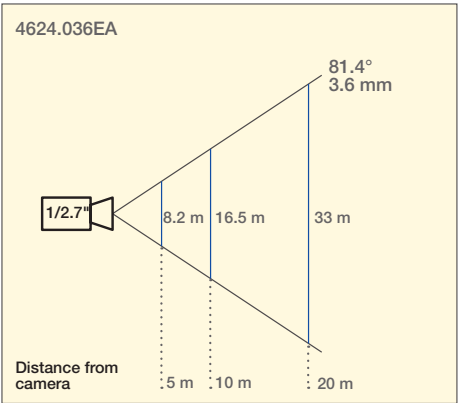
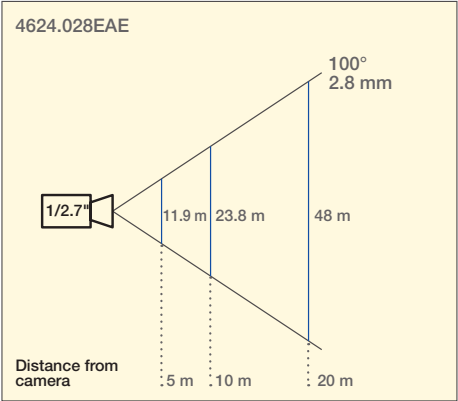


Built-in microphone

Code	▲ 4624.028EAE	Δ 4624.036EA
Sensor	1/2.7" CMOS	1/2.7" CMOS
Resolution	5 Mpx - 2592 × 1944	5 Mpx - 2592 × 1944
Sensitivity	0.002 lux @F1.6, AGC ON; 0 lux (IR LED ON)	0.006 lux @F1.2, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, H.265S, MJPEG
Day & night	ICR	ICR
Lens	2.8 mm @ F1.6 (100°)	3.6 mm @ F1.6 (81.4°)
Main frame rate	25 Fps (2592 x 1944) 25 Fps (2592 x 1520) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720) 50 Fps (1920 x 1080) ** 50 Fps (1280 x 720) **	25 Fps (2592 x 1944) 25 Fps (2592 x 1520) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720) 25 Fps (1280 x 720)
Secondary frame rate	25 Fps (1280 x 720) 25 Fps (704 x 576)	12 Fps (1280 x 720) 25 Fps (D1) 25 Fps (CIF) 25 Fps (480 x 240)
Bit Rate	64 Kbps ~ 8 Mbps	64 Kbps ~ 8 Mbps
SD card	Yes, not included (256GB max)	Yes, not included (256GB max)
In/Out audio	1/0 (built-in MIC)	1/0 (built-in MIC)
In/Out alarm	0/0	0/0
CVBS output video	No	No
Intelligent video analysis	Video anomaly, line crossing, abandoned or removed object, area intrusion, enter area, exit area, vehicle/person count, heat map, metadata, face recognition	Video anomaly, line crossing, area intrusion, vehicle/person count, face detection and recognition
Functions	3D-DNR, motion, HLC, BLC, defog, corridor	3D-DNR, motion, HLC, BLC, defog
WDR	Real WDR (120 dB)	Real WDR (120 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge, Firefox, Chrome and Safari	Internet Explorer, Edge (IE compatibility)
Smart IR	20 m	20 m
IP/IK degree	IP66 / IK10	IP66 / IK10
Temperature range	-30°C / +60°C	-30°C / +60°C
Power supply/consumptions	12 Vdc 350 mA, 4.2 W IEEE802.3af PoE	12 Vdc 330 mA, 4 W IEEE802.3af PoE
Dimensions mm	ø 110 x 60	ø 110 x 60
Weight (g)	349	349
Pole bracket	46917.005	46917.005
Contact box	46922.013	46922.013
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.  
\*\* HFR mode: capture every detail, can record to SD card with 2 Mpx resolution and high frame rates, up to 50 fps, ideal function for still images.

Shooting range



SECURITY

ELVEX CCTV : video surveillance system



Dome 5 Mpx IP cameras



Built-in microphone

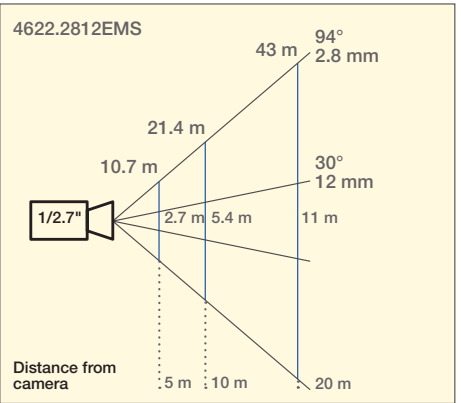
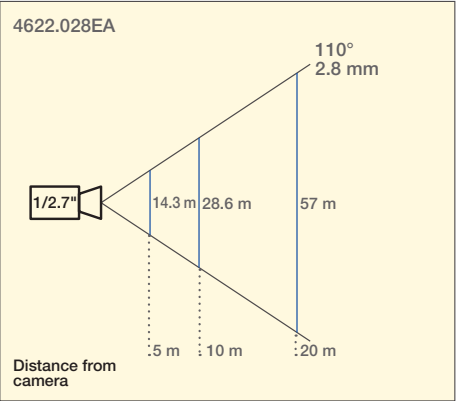


Built-in microphone

Code	▲ 4622.028EA	Δ 4622.2812EMS motorised
Sensor	1/2.7" CMOS	1/2.7" CMOS
Resolution	5 Mpx - 2880 × 1620	5 Mpx - 2592 × 1944
Sensitivity	0.007 lux @F1.6, AGC ON; 0 lux (IR LED ON)	0.0085 lux @F1.2, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, MJPEG
Day & night	ICR	ICR
Lens	2.8 mm @F1.6 (110°)	2.8–12 mm @ F1.4 (94° – 30°) Motorised
Main frame rate	20 Fps (2880 x 1620) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)	20 Fps (2592 x 1944) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)
Secondary frame rate	25 Fps (1280 x 720) 25 Fps (704 x 576) 25 Fps (640 x 480) 25 Fps (352 x 288)	12 Fps (1280 x 720) 25 Fps (D1) 25 Fps (CIF) 25 Fps (480 x 240)
Bit Rate	64 Kbps ~ 8 Mbps	64 Kbps ~ 5 Mbps
SD card	Yes, not included (256GB max)	No
In/Out audio	1/0 (built-in MIC)	1/0 (built-in MIC)
In/Out alarm	0/0	0/0
CVBS output video	No	No
Intelligent video analysis	Video anomaly, line crossing, abandoned or removed object, area intrusion	No
Functions	3D-DNR, motion, HLC, BLC, corridor	3D-DNR, motion, HLC, BLC, defog
WDR	Real WDR (120 dB)	WDR (90 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge, Firefox, Chrome and Safari	Internet Explorer, Edge (IE compatibility)
Smart IR	20 – 30 m	30 – 50 m
IP/IK degree	IP67	IP67 / -
Temperature range	-30°C / +60°C	-30°C / +60°C
Power supply/consumptions	12 Vdc 370 mA, 4.5 W IEEE802.3af PoE	12 Vdc 640 mA, 7.7 W IEEE802.3af PoE
Dimensions mm	ø 95 x 83	ø 112 x 100
Weight (g)	430	600
Contact box	46922.040	46922.041
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range





Dome 5 Mpx IP cameras



Built-in microphone

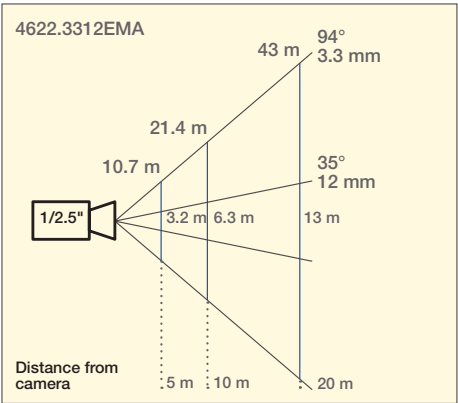
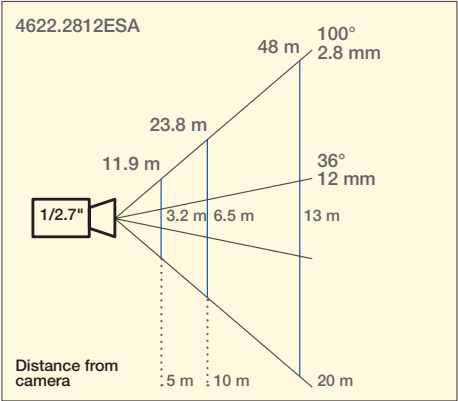


Built-in microphone

Code	▲ 4622.2812ESA motorised	Δ 4622.3312EMA motorised
Sensor	1/2.7" CMOS	1/2.5" CMOS
Resolution	5 Mpx - 2880 x 1620	5 Mpx - 2592 x 1944
Sensitivity	0.007 lux @F1.6, AGC ON; 0 lux (IR LED ON)	0.013 lux @F1.2, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, MJPEG
Day & night	ICR	ICR
Lens	2.8–12 mm @ F1.6 (100° – 36°) Motorised	3.3–12 mm @ F1.4 (94° – 35°) Motorised
Main frame rate	20 Fps (2880 x 1620) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)	25 Fps (2592 x 1944) 25 Fps (2592 x 1520) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)
Secondary frame rate	25 Fps (1280 x 720) 25 Fps (704 x 576) 25 Fps (640 x 480) 25 Fps (352 x 288)	12 Fps (1280 x 720) 25 Fps (D1) 25 Fps (CIF) 25 Fps (480 x 240)
Bit Rate	64 Kbps ~ 8 Mbps	128 Kbps ~ 10 Mbps
SD card	Yes, not included (256GB max)	Yes, not included (128GB max)
In/Out audio	1/0 (built-in MIC)	1/1 (built-in MIC)
In/Out alarm	0/0	1/1
CVBS output video	No	Yes
Intelligent video analysis	Video anomaly, line crossing, abandoned or removed object, area intrusion	Video anomaly, line crossing, abandoned or removed object, area intrusion, face detection and recognition
Functions	3D-DNR, motion, HLC, BLC, corridor	3D-DNR, motion, HLC, BLC, defog, corridor
WDR	Real WDR (120 dB)	Real WDR (120 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge, Firefox, Chrome and Safari	Internet Explorer, Edge (IE compatibility)
Smart IR	30 – 50 m	30 – 50 m
IP/IK degree	IP67	IP67 / IK10
Temperature range	-30°C / +60°C	-30°C / +60°C
Power supply/ consumptions	12 Vdc 600 mA, 7.2 W IEEE802.3af PoE	12 Vdc 830 mA, 10 W IEEE802.3af PoE
Dimensions mm	ø 112 x 100	ø 141 x 100
Weight (g)	625	930
Contact box	46922.041	46922.042
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range



Dome 5 Mpx IP cameras



Built-in microphone



Deterrent effect

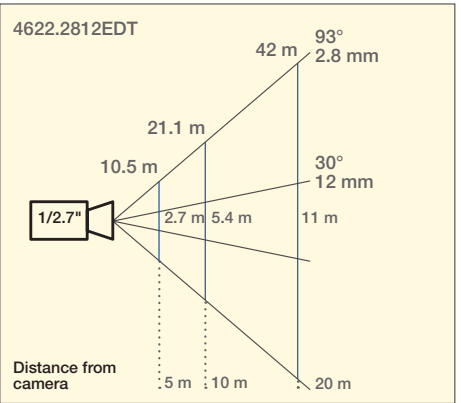
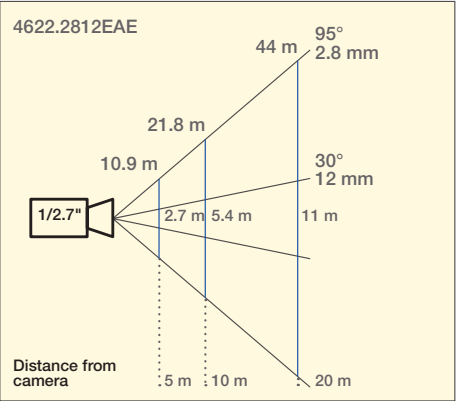
Built-in mic+speaker

Code	▲ 4622.2812EAE motorised	▲ 4622.2812EDT motorised
Sensor	1/2.7" CMOS	1/2.7" CMOS
Resolution	5 Mpx - 2592 x 1944	5 Mpx - 2592 x 1944
Sensitivity	0.01 lux @F1.4, AGC ON; 0 lux (IR LED ON)	0.008 lux @F1.4, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, H.265+, H.265S, MJPEG
Day & night	ICR	ICR
Lens	2.8–12 mm @ F1.6 (95° – 30°) Motorised	2.8–12 mm @ F1.6 (93° – 30°) Motorised
Main frame rate	25 Fps (2592 x 1944) 25 Fps (2592 x 1520) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720) 50 Fps (1920 x 1080) ** 50 Fps (1280 x 720) **	25 Fps (2592 x 1944) 25 Fps (2592 x 1520) 25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720) 50 Fps (1920 x 1080) ** 50 Fps (1280 x 720) **
Secondary frame rate	25 Fps (1280 x 720) 25 Fps (704 x 576)	25 Fps (1280 x 720) 25 Fps (704 x 576)
Bit Rate	64 Kbps ~ 8 Mbps	64 Kbps ~ 9 Mbps
SD card	Yes, not included (256GB max)	Yes, not included (256GB max)
In/Out audio	1/1 (built-in MIC)	1/1 (built-in SPEAKER/MIC)
In/Out alarm	1/1	1/1
CVBS output video	Yes	No
Intelligent video analysis	Video anomaly, line crossing, abandoned or removed object, area intrusion, enter area, exit area, vehicle/person count, heat map, metadata, face recognition	Video anomaly, line crossing, area intrusion, enter area, exit area
Functions	3D-DNR, motion, HLC, BLC, defog, corridor	3D-DNR, motion, HLC, BLC, defog, corridor
WDR	Real WDR (120 dB)	Real WDR (120 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge, Firefox, Chrome and Safari	Internet Explorer, Edge (IE compatibility)
Smart IR	30 – 50 m	30 – 50 m
IP/IK degree	IP67 / IK10	IP66
Temperature range	-30°C / +60°C	-30°C / +60°C
Power supply/ consumptions	12 Vdc 700 mA, 8.4 W IEEE802.3af PoE	12 Vdc 900 mA, 11 W IEEE802.3af PoE
Dimensions mm	ø 141 x 100	ø 112 x 100
Weight (g)	930	625
Contact box	46922.042	46922.041
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

\*\* HFR mode: capture every detail, can record to SD card with 2 Mpx resolution and high frame rates, up to 50 fps, ideal function for still images.

Shooting range







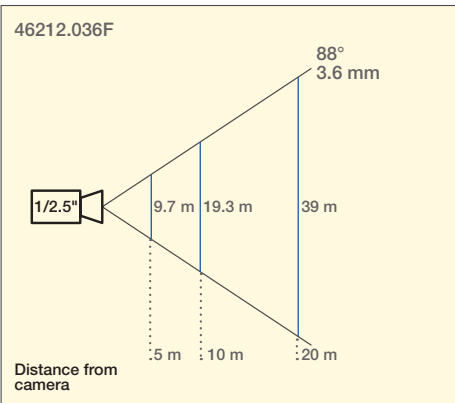
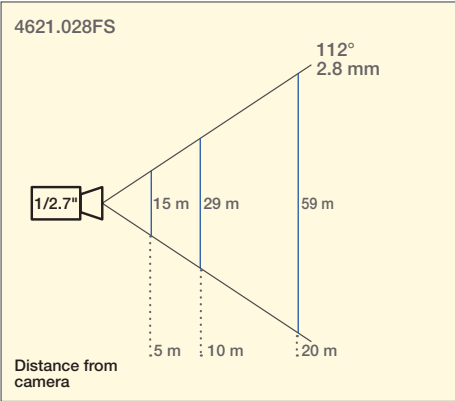
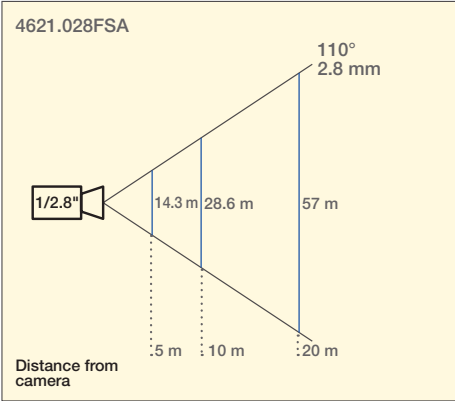
Bullet IP 8 Mpx cameras



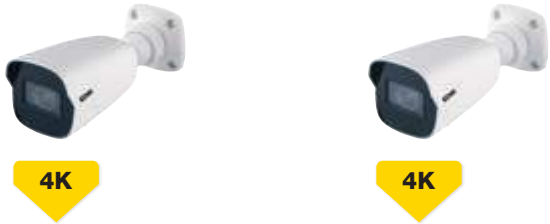
Code	▲ 4621.028FSA	Δ 4621.028FS	Δ 46212.036F
Sensor	1/2.8" CMOS	1/2.7" CMOS	1/2.5" CMOS
Resolution	8 Mpx - 3840 × 2160	8 Mpx - 3840 × 2160	8 Mpx - 3840 × 2160
Sensitivity	0.02 lux @F1.6, AGC ON; 0 lux (IR LED ON)	0.032 lux @F1.2, AGC ON; 0 lux (IR LED ON)	0.024 lux @F1.2, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, MJPEG	H.264, H.265, MJPEG
Day & night	ICR	ICR	ICR
Lens	2.8 mm @F1.6 (110°)	2.8 mm @F2.0 (112°)	3.6 mm @F1.6 (88°)
Main frame rate	20 Fps (3840 × 2160) 25 Fps (3072 × 2048) 25 Fps (2592 × 1944) 25 Fps (2560 × 1440) 25 Fps (2304 × 1296) 25 Fps (1920 × 1080) 25 Fps (1280 × 720)	20 Fps (3840 × 2160) 20 Fps (3072 × 2048) 25 Fps (2592 × 1944) 25 Fps (2560 × 1440) 25 Fps (1920 × 1080)	25 Fps (3840 × 2160) 25 Fps (2560 × 1440) 25 Fps (2304 × 1296) 25 Fps (1920 × 1080) 25 Fps (1280 × 720)
Secondary frame rate	25 Fps (1280 × 720) 25 Fps (704 × 480) 25 Fps (480 × 240)	25 Fps (1280 × 720) 25 Fps (D1) 25 Fps (CIF)	25 Fps (1280 × 720) 25 Fps (D1) 25 Fps (CIF) 25 Fps (480 × 240)
Bit Rate	64 Kbps ~ 12 Mbps	128 Kbps ~ 8 Mbps	128 Kbps ~ 12 Mbps
SD card	Yes, not included (256GB max)	Yes, not included (128 GB max)	No
In/Out audio	1/0	1/0	1/0
In/Out alarm	0/0	0/0	0/0
CVBS output video	No	No	Yes
Intelligent video analysis	Video anomaly, line crossing, area intrusion	No	No
Functions	3D-DNR, motion, HLC, BLC, defog, corridor	3D-DNR, motion, HLC, BLC, defog	3D-DNR, motion, HLC, BLC, defog
WDR	Real WDR (120 dB)	WDR (90 dB)	Real WDR (120 dB)
ROI	8	8	8
Zone Privacy	4	4	4
Supported browsers	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge (IE compatibility)
Smart IR	30 – 50 m	20 – 30 m	20 – 30 m
IP degree	IP67	IP67	IP66
Temperature range	-30°C / +60°C	-30°C / +60°C	-20°C / +60°C
Power supply/ consumptions	12 Vdc 600 mA, 7.2 W IEEE802.3af PoE	12 Vdc 450 mA, 5.4 W IEEE802.3af PoE	12 Vdc 500 mA, 6 W IEEE802.3af PoE
Dimensions (mm)	80 x 80 x 218	75 x 75 x 168	ø 87 x 219
Weight (g)	640	435	630
Pole bracket	46917.005	46917.005	46917.002
Contact box	46922.040	46922.040	46922.014
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range



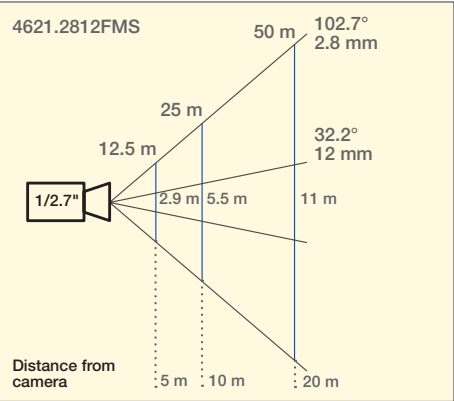
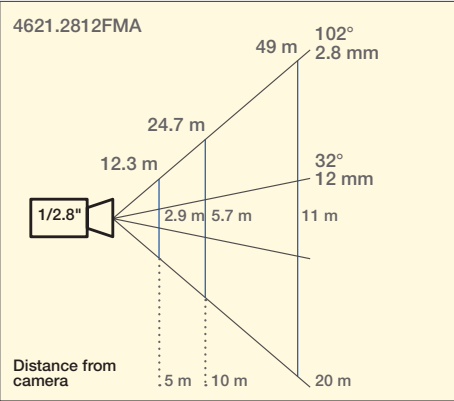
Bullet IP 8 Mpx cameras



Code	▲ 4621.2812FMA motorised	Δ 4621.2812FMS motorised
Sensor	1/2.8" CMOS	1/2.7" CMOS
Resolution	8 Mpx - 3840 × 2160	8 Mpx - 3840 × 2160
Sensitivity	0.02 lux @F1.6, AGC ON; 0 lux (IR LED ON)	0.032 lux @F1.2, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, MJPEG
Day & night	ICR	ICR
Lens	2.8–12 mm @ F1.6 (102° – 32°) Motorised	2.8–12 mm @F1.4, (102.7° – 32.2°) Motorised
Main frame rate	20 Fps (3840 × 2160) 25 Fps (3072 × 2048) 25 Fps (2592 × 1944) 25 Fps (2560 × 1440) 25 Fps (2304 × 1296) 25 Fps (1920 × 1080) 25 Fps (1280 × 720)	20 Fps (3840 × 2160) 20 Fps (3072 × 2048) 25 Fps (2592 × 1944) 25 Fps (2560 × 1440) 25 Fps (1920 × 1080)
Secondary frame rate	25 Fps (1280 × 720) 25 Fps (704 × 480) 25 Fps (480 × 240)	25 Fps (1280 × 720) 25 Fps (D1) 25 Fps (CIF)
Bit Rate	64 Kbps ~ 12 Mbps	64 kbps ~ 8 Mbs
SD card	Yes, not included (256GB max)	Yes, not included (128 GB max)
In/Out audio	1/0	1/0
In/Out alarm	0/0	0/0
CVBS output video	No	No
Intelligent video analysis	Video anomaly, line crossing, area intrusion	No
Functions	3D-DNR, motion, HLC, BLC, defog, corridor	3D-DNR, motion, HLC, BLC, defog
WDR	Real WDR (120 dB)	WDR (90 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge (IE compatibility)
Smart IR	30 – 50 m	30 – 50 m
IP degree	IP67	IP67
Temperature range	-30°C / +60°C	-30°C ~ + 60°C
Power supply/ consumptions	12 Vdc 600 mA, 7.2 W IEEE802.3af PoE	12 Vdc 700 mA, 8.4 W IEEE802.3af PoE
Dimensions (mm)	81 x 81 x 218	81 x 81 x 218
Weight (g)	640	640
Pole bracket	46917.005	46917.005
Contact box	46922.040	46922.040
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range





Dome 8 Mpx IP cameras



4K Built-in microphone

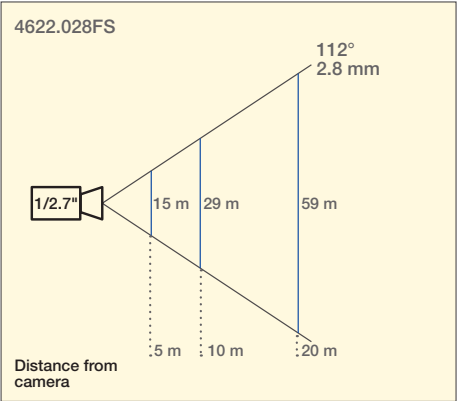
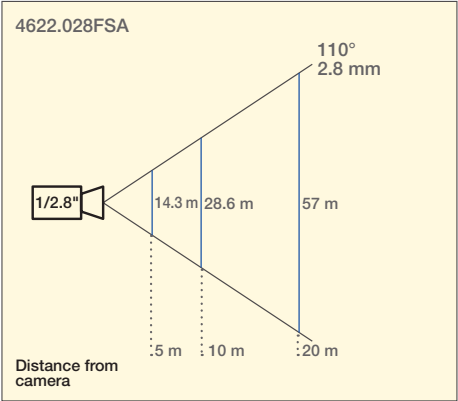


4K Built-in microphone

Code	▲ 4622.028FSA	Δ 4622.028FS
Sensor	1/2.8" CMOS	1/2.7" CMOS
Resolution	8 Mpx - 3840 × 2160	8 Mpx - 3840 × 2160
Sensitivity	0.02 lux @F1.6, AGC ON; 0 lux (IR LED ON)	0.032 lux @F1.2, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, MJPEG
Day & night	ICR	ICR
Lens	2.8 mm @F1.6 (110°)	2.8 mm @F2.0 (112°)
Main frame rate	20 Fps (3840 × 2160) 25 Fps (3072 × 2048) 25 Fps (2592 × 1944) 25 Fps (2592 × 1520) 25 Fps (2560 × 1440) 25 Fps (2304 × 1296) 25 Fps (1920 × 1080) 25 Fps (1280 × 720)	20 Fps (3840 × 2160) 20 Fps (3072 × 2048) 25 Fps (2592 × 1944) 25 Fps (2560 × 1440) 25 Fps (2304 × 1296) 25 Fps (1920 × 1080)
Secondary frame rate	25 Fps (1280 × 720) 25 Fps (704 × 480) 25 Fps (480 × 240)	25 Fps (1280 × 720) 25 Fps (D1) 25 Fps (CIF)
Bit Rate	64 Kbps ~ 12 Mbps	64 Kbps ~ 8 Mbps
SD card	Yes, not included (256GB max)	Yes, not included (128 GB max)
In/Out audio	1/0 (built-in MIC)	1/0 (built-in MIC)
In/Out alarm	0/0	0/0
CVBS output video	No	No
Intelligent video analysis	Video anomaly, line crossing, area intrusion	No
Functions	3D-DNR, motion, HLC, BLC, defog, corridor	3D-DNR, motion, HLC, BLC, defog
WDR	Real WDR (120 dB)	Real WDR (120 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge (IE compatibility)
Smart IR	20 – 30 m	20 – 30 m
IP/IK degree	IP67	IP67 / -
Temperature range	-30°C / +60°C	-30°C / +60°C
Power supply/ consumptions	12 Vdc 500 mA, 6 W IEEE802.3af PoE	12 Vdc 450 mA, 5.4 W IEEE802.3af PoE
Dimensions (mm)	ø 95 x 83	ø 95 x 83
Weight (g)	430	430
Contact box	46922.040	46922.040
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range



Dome 8 Mpx IP cameras



4K Built-in microphone



4K Built-in microphone

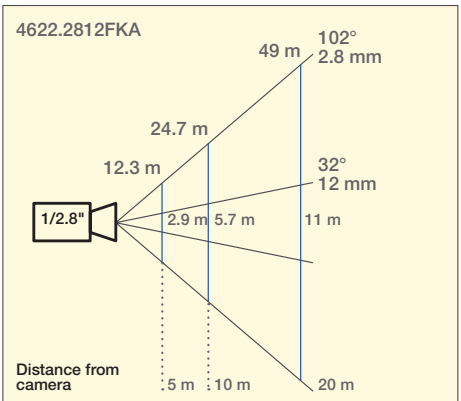
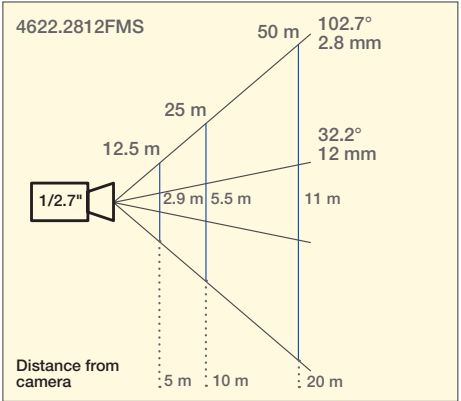
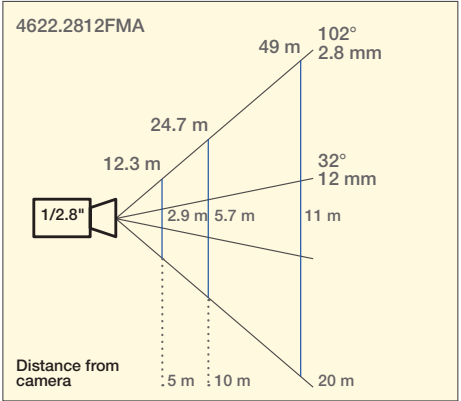


4K Built-in microphone Plus

Code	▲ 4622.2812FMA motorised	Δ 4622.2812FMS motorised	▲ 4622.2812FKA motorised
Sensor	1/2.8" CMOS	1/2.7" CMOS	1/2.8" CMOS
Resolution	8 Mpx - 3840 × 2160	8 Mpx - 3840 × 2160	8 Mpx - 3840 × 2160
Sensitivity	0.02 lux @F1.6, AGC ON; 0 lux (IR LED ON)	0.032 lux @F1.2, AGC ON; 0 lux (IR LED ON)	0.02 lux @F1.6, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG	H.264, H.265, MJPEG	H.264, H.265, H.265+, MJPEG
Day & night	ICR	ICR	ICR
Lens	2.8-12 mm @ F1.6 (102°- 32°) Motorised	2.8-12 mm @ F1.4 (102.7°- 32.2°) Motorised	2.8-12 mm @ F1.6 (102°- 32°) Motorised
Main frame rate	20 Fps (3840 × 2160) 25 Fps (3072 × 2048) 25 Fps (2592 × 1944) 25 Fps (2592 × 1520) 25 Fps (2560 × 1440) 25 Fps (2304 × 1296) 25 Fps (1920 × 1080) 25 Fps (1280 × 720)	20 Fps (3840 × 2160) 20 Fps (3072 × 2048) 25 Fps (2592 × 1944) 25 Fps (2560 × 1440) 25 Fps (2304 × 1296) 25 Fps (1920 × 1080)	20 Fps (3840 × 2160) 25 Fps (3072 × 2048) 25 Fps (2592 × 1944) 25 Fps (2592 × 1520) 25 Fps (2560 × 1440) 25 Fps (2304 × 1296) 25 Fps (1920 × 1080) 25 Fps (1280 × 720)
Secondary frame rate	25 Fps (1280 × 720) 25 Fps (704 × 480) 25 Fps (480 × 240)	25 Fps (1280 × 720) 25 Fps (D1) 25 Fps (CIF)	25 Fps (1280 × 720) 25 Fps (704 × 480) 25 Fps (480 × 240)
Bit Rate	64 Kbps ~ 12 Mbps	64 kbps ~ 8 Mbps	64 Kbps ~ 12 Mbps
SD card	Yes, not included (256GB max)	Yes, not included (128 GB max)	Yes, not included (256GB max)
In/Out audio	1/0 (built-in MIC)	1/0 (built-in MIC)	1/1 (built-in MIC)
In/Out alarm	0/0	0/0	1/1
CVBS output video	No	No	Yes
Intelligent video analysis	Video anomaly, line crossing, area intrusion	No	Video anomaly, line crossing, area intrusion
Functions	3D-DNR, motion, HLC, BLC, defog, corridor	3D-DNR, motion, HLC, BLC, defog	3D-DNR, motion, HLC, BLC, defog, corridor
Smart IR	30 – 50 m	30 – 50 m	30 – 50 m
WDR	Real WDR (120 dB)	WDR (90 dB)	Real WDR (120 dB)
ROI	8	8	8
Zone Privacy	4	4	4
Supported browsers	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge (IE compatibility)
IP/IK degree	IP67 / -	IP67 / -	IP67 / IK10
Temperature range	-30°C / +60°C	-30°C / +60°C	-30°C / +60°C
Power supply/ consumptions	12 Vdc 600 mA, 7.2 W IEEE802.3af PoE	12 Vdc 700 mA, 8.4 W IEEE802.3af PoE	12 Vdc 700 mA, 8.4 W IEEE802.3af PoE
Dimensions (mm)	ø 112 x 100	ø 112 x 100	ø 141 x 100
Weight (g)	625	625	930
Contact box	46922.041	46922.041	46922.042
Notes	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible	RTSP*, multi-stream. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Shooting range





SECURITY

ELVEX CCTV : video surveillance system



Special cameras



Code	46235.180PAN
Sensors	4 sensors 1/2.8" CMOS
Resolution	4 x 2 Mpx - 4096 x 1800
Sensitivity	0.008 lux @F2.0, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, H.265+, MJPEG
Day & night	ICR
Lens	4 x 3.2 mm @F2.0 (180°)
Main frame rate	25 Fps (4096 x 1800) 25 Fps (3840 x 1680) 25 Fps (2880 x 1264)
Secondary frame rate	25 Fps (1920 x 832) 25 Fps (1280 x 560) 25 Fps (1024 x 452) 25 Fps (704 x 320)
Bit Rate	128 Kbs ~ 9 Mbs
SD card	Yes, not included (256 GB max)
In/Out audio	1/1
In/Out alarm	1/1
CVBS Video Output	No
Intelligent video analysis	Video anomaly, line crossing, area intrusion, vehicle/person count, face detection and recognition
Functions	3DNR, motion, HLC, BLC, defog
WDR	DWDR (90 dB)
ROI	8
Zone Privacy	4
Supported browsers	Internet Explorer, Edge (IE compatibility)
Smart IR	20 m
IP/IK degree	IP67 / IK10
Temperature range	-30°C / +60°C
Power supply/ consumptions	12 Vdc 1.1 A, 13.2 W IEEE802.3af PoE
Dimensions mm	289 x 160 x 138
Weight (g)	2,100
Contact box	46922.042
Notes	Multi-stream, database max 10,000 faces. ONVIF compatible

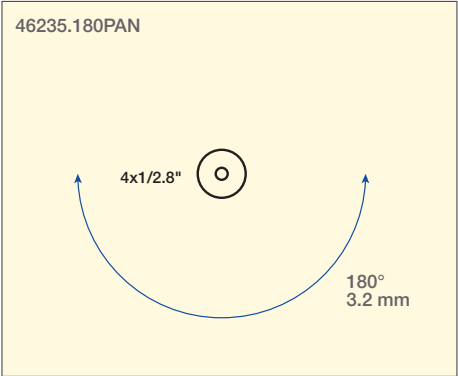
\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

Panoramic Camera (46235.180PAN)

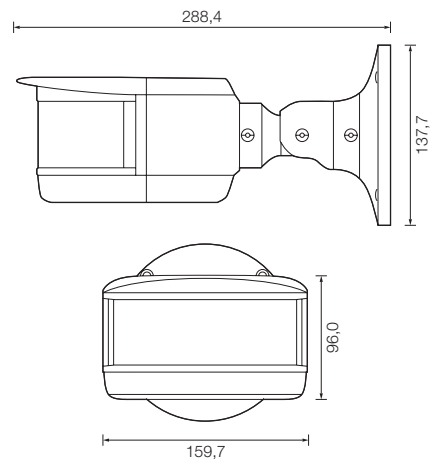


180° panoramic shot

Shooting range



Dimensions in mm (46235.180PAN)



SECURITY

ELVEX CCTV : video surveillance system



Special cameras

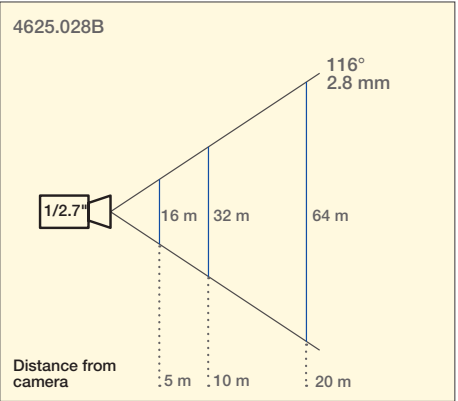
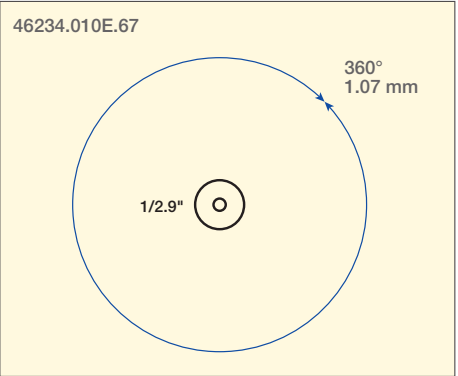


Code	46234.010E.67	Δ 4625.028B
Sensor	1/2.9" CMOS	1/2.7" CMOS
Resolution	5 Mpx - 3096 x 2202 (2160 x 2160 panoramic)	2 Mpx - 1920 x 1080
Sensitivity	0.024 lux @F1.2, AGC ON; 0 Lux (IR LED ON)	0.007 lux @F1.2, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, MJPEG	H.264, H.265, MJPEG
Day & night	ICR	ICR
Lens	1.07 mm @ F2.5 viewing angle: 180° (wall) / 360° (ceiling)	2.8 mm @F1.85 (116°)
Main frame rate	1) Fisheye+panorama+3 PTZ 25 Fps (2160 x 2160/1920 x 1920/1440 x 1440) 25 Fps (1920 x 1080) 25 Fps (960 x 540) x 3 2) Fisheye+4 PTZ 25 Fps (2160 x 2160/1920 x 1920 /1440 x 1440) 25 Fps (960 x 540) x 4	25 Fps (1920 x 1080) 25 Fps (1280 x 720) 25 Fps (D1) 25 Fps (CIF) 25 Fps (480 x 240)
Secondary frame rate	25 Fps (960 x 960) 25 Fps (960 x 540) 25 Fps (704 x 576) 25 Fps (480 x 480) 25 Fps (480 x 240)	25 Fps (D1) 25 Fps (CIF) 25 Fps (480 x 240)
Bit Rate	128 kbps ~ 10 Mbps	128 Kbs ~ 6 Mbs
SD card	Yes, not included (256 GB max)	Yes, not included (128 GB max)
In/Out audio	1/1 (built-in MIC)	1/1 (built-in MIC/SPEAKER)
In/Out alarm	1/1	1/1
CVBS output video	Yes	No
Intelligent video analysis	No	No
Functions	3D-DNR, motion, HLC, BLC	3D-DNR, motion, HLC, BLC, defog, corridor, PIR
WDR	WDR (90 dB)	Digital WDR (90 dB)
ROI	8	8
Zone Privacy	4	4
Supported browsers	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge (IE compatibility)
Smart IR	20 – 30 m	10 m
IP degree	IP67	-
Temperature range	-10°C ~ +50°C	0°C / +45°C
Power supply/ consumptions	12 Vdc 880 mA, 10.6 W IEEE802.3af PoE	12 Vdc 220 mA, 2.7W IEEE802.3af PoE
Dimensions mm	ø 130 x 39	72 x 72 x 130
Weight (g)	432	185
Contact box	46922.019	-
Notes	RTSP*, multi-stream. ONVIF compatible	IEEE802.11b/g/n - 2.4GHz RTSP*, multi-stream, bracket included for table, surface or ceiling mounting. ONVIF compatible

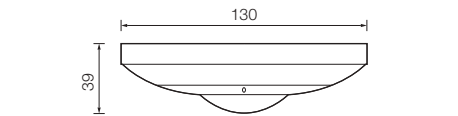
\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR or as an additional camera for IP video door entry systems.

\*\* The Fisheye camera 46234.010E.67 is compatible with NVR: 46NVR.64 and kit 46KIT.1634E

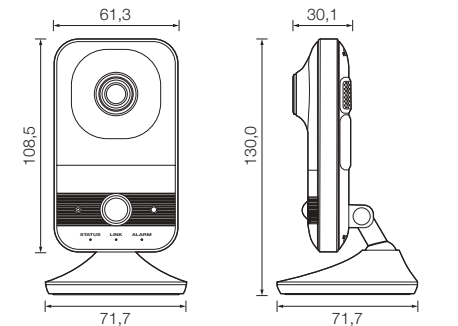
Shooting range



Dimensions in mm (46234.010E.67)



Dimensions in mm (4625.028B)



Bracket for IP Fisheye camera



46922.019

Bracket with contact box for IP Fisheye cameras for surface or ceiling mounting



PTZ (Speed Dome) IP 2 and 4 Mpx cameras



Model	46235.015B	46235.030D
Sensor	1/2.8" CMOS	1/2.5" CMOS
Resolution	2 Mpx - 1920 x 1080	4 Mpx - 2560 x 1440
Sensitivity	0.005lux (colour) / 0.001lux (B/W) @F1.6, AGC ON; 0 lux (IR LED ON)	0.01lux (colour) / 0.002lux (B/W) @F1.5, AGC ON; 0 lux (IR LED ON)
Video compression	H.264, H.265, MJPEG	H.264, H.265, MJPEG
Day & night	Auto / Manual / Timing	Auto / Manual / Timing
Lens	15x Optical Zoom (5 – 75 mm)	30x Optical Zoom (4.7 – 141 mm)
Viewing angle	54° Wide - 4° Tele	62.5° Wide - 2.1° Tele
Main frame rate	25 Fps (1920 x 1080) 25 Fps (1280 x 720)	25 Fps (2560 x 1440) 25 Fps (2304 x 1296) 25 Fps (1920 x 1080) 25 Fps (1280 x 720)
Secondary frame rate	25 Fps (1280 x 720) 25 Fps (704 x 576) 25 Fps (480 x 240) 25 Fps (352 x 288)	25 Fps (1280 x 720) 25 Fps (704 x 576) 25 Fps (480 x 240) 25 Fps (352 x 288)
Bit Rate	64 kbps / 4 Mbps	64 kbps / 6 Mbps
Pan/Tilt limit	360° Continuous, -5° to 90° auto Flip	360° Continuous, -3° to 90° auto Flip
Preset	360	360
Patrol/Pattern	8/4	8/4
SD card	Yes, not included (256 GB max)	Yes, not included (256 GB max)
In/Out audio	0/0	1/1
In/Out alarm	0/0	1/1
CVBS output video	No	No
Intelligent video analysis	Video anomaly, line crossing, area intrusion, vehicle/person count, face detection and recognition	Video anomaly, line crossing, area intrusion, vehicle/person count, face detection and recognition
Functions	3D-DNR, BLC, HLC, smart tracking, defog	3D-DNR, BLC, HLC, smart tracking, defog
WDR	WDR (120 dB)	WDR (120 dB)
Supported browsers	Internet Explorer, Edge (IE compatibility)	Internet Explorer, Edge (IE compatibility)
Smart IR	up to 150 m	up to 100 m
IP degree	IP66	IP66
Temperature range	-30°C / +55°C	-30°C / +60°C
Power supply/consumptions	12 Vdc, 22 W IEEE802.3at PoE	24 Vdc, 30 W IEEE802.3at PoE
Dimensions (mm)	ø 173 x 247 camera only	ø 209 x 328 camera only
Weight (g)	2,100	3,700
Notes	Multi-stream, database max 10,000 faces. Wall bracket included. ONVIF compatible	Multi-stream, database max 10,000 faces. Surface mounting bracket and power supply unit included. ONVIF compatible

\* RTSP: function for direct connection to the By-me Plus home automation system without the use of NVR.

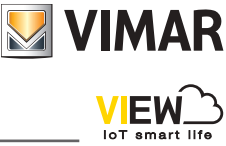
Bracket for PTZ cameras



46917.002.001  
Pole bracket suitable for Speed Dome (PTZ)



46918.201  
Ceiling bracket for Speed Dome (PTZ)



Overvoltage protection



Recommended for Speed Dome

46264.002  
Passive overvoltage protection for Ethernet line with or without PoE. RJ45 in/out connection.

Keypad for PTZ control



46916.004  
IP keypad for controlling IP PTZ, controls 10 devices simultaneously, 3-axis control. Standard 12 Vdc power supply unit.



Δ 46916.001  
RS485 keypad for PTZ control and DVR management, multi-protocol, 8 devices in cascade (in-out) 4-line display, 3-axis control, 12V power supply unit.



46916.005  
Control keypad for Speed Dome cameras, with 3-axis function, Pelco D, Pelco P Protocol, standard 12 Vdc 2 A power supply unit. Dimensions: 220x130x90 mm



SECURITY

ELVAX CCTV : video surveillance system



Real time PoE NVR up to 8 MPX



Model	46NVR.04PS	46NVR.08PS	46NVR.08P	46NVR.16P
Video input	4 Ch	8 Ch	8 Ch	16 Ch
PoE ports	4	8	8	16
Hard disk drive	1 TB Professional	1 TB Professional	1 TB Professional	2 TB Professional
Fisheye camera	No	No	No	No
Recording resolution	Real time 6 Mpx 4 CH @ 25 Fps per CH	Real time 6 Mpx 8 CH @ 25 Fps per CH	Real time 8 Mpx 8 CH @ 25 Fps per CH	Real time 8 Mpx 16 CH @ 25 Fps per CH
Video compression	H.264 - H.265 - H.265+ - H.265S	H.264 - H.265 - H.265+ - H.265S	H.264 - H.265 - H.265+ - H.265S	H.264 - H.265 - H.265+ - H.265S
Operating mode	Pentaplex	Pentaplex	Pentaplex	Pentaplex
Input/Output Bandwidth	28/28 (Mbps)	40/40 (Mbps)	80/80 (Mbps)	112/112 (Mbps)
Video output	1 HDMI, 1 VGA	1 HDMI, 1 VGA	1 HDMI, 1 VGA	1 HDMI, 1 VGA
In/Out audio	0 / 0	0 / 0	1 / 1	1 / 1
VGA / HDMI resolution	1080p / 1080p	1080p / 1080p	1080p / 4K	1080p / 4K
In/Out alarm	-/- (46936.001)	-/- (46936.001)	-/- (46936.001)	-/- (46936.001)
Network interface	1 RJ45 - 100Mbps	1 RJ45 - 100Mbps	1 RJ45 - 10/100/1000Mbps	1 RJ45 - 10/100/1000Mbps
Hard drive interface	1 SATA (max 8 TB)	1 SATA (max 8 TB)	1 SATA (max 8 TB)	2 SATA (max 8 TB)
USB interface	2	2	2	2
RS485	No	No	No	No
PTZ control	Yes	Yes	Yes	Yes
CVM	Yes	Yes	Yes	Yes
QR CODE	Yes	Yes	Yes	Yes
Control via smartphone	Android, iPhone	Android, iPhone	Android, iPhone	Android, iPhone
Video analysis	Yes *	Yes *	Yes *	Yes *
Privacy filter	Yes	Yes	Yes	Yes
Interface	mouse, remote control	mouse, remote control	mouse, remote control	mouse, remote control
Power supply/ consumptions (not including PoE and HDD)	+48 V 1.25 A / 6 W (single power supply unit)	+48 V 2.5 A / 6 W (single power supply unit)	+48 V 2.5 A / 10 W (single power supply unit)	+48 V 3.75 A / 15 W (single power supply unit)
Operating temperature	-10 °C ~ +50 °C	-10 °C ~ +50 °C	0 °C ~ +50 °C	0 °C ~ +50 °C
Cooling fan	No	No	No	Yes
Dimensions (mm)	255 x 222 x 42	255 x 222 x 42	300 x 248 x 52	380 x 269 x 52
Weight (kg)	1 (not including HDD)	1 (not including HDD)	1.2 (not including HDD)	2 (not including HDD)
Notes				1 rack unit

**Note:** with the new **1.4.5 firmware**, NVRs are also compatible with browsers other than Explorer without the need to install plug-ins (Edge, Firefox, Chrome, Safari and Opera).  
**Plug&Play:** these PoE NVRs allow direct Plug&Play connection to the cameras, i.e. camera power supply and auto-configuration.  
\* Compatible with cameras with smart video analysis.

By-camera App available from the Vimar website or Apple Store and Google Play

SECURITY

ELVAX CCTV : video surveillance system



Real time NVR up to 8 MPX



Model	46NVR.16	46NVR.32	46NVR.64
Video input	16 Ch	32 Ch	64 Ch
PoE ports	No	No	No
Hard disk drive	2 TB Professional	2 TB Professional	Not included
Fisheye camera	No	No	Compatible
Recording resolution	Real time 8 Mpx 16 CH @ 25 Fps per CH	Real time 8 Mpx 32 CH @ 25 Fps per CH	Real time 8 Mpx 64 CH @ 25 Fps per CH
Video compression	H.264 - H.265 - H.265+ - H.265S	H.264 - H.265 - H.265+ - H.265S	H.264 - H.265 - H.265+ - H.265S
Operating mode	Pentaplex	Pentaplex	Pentaplex
Input/Output Bandwidth	112/112 (Mbps)	112/112 (Mbps)	320/320 (Mbps)
Video output	1 HDMI, 1 VGA	1 HDMI, 1 VGA	2 HDMI, 1 VGA
In/Out audio	1 / 1	1 / 1	1 / 1
VGA / HDMI resolution	1080p / 4K	1080p / 4K	1080p / 4K - 1080p
In/Out alarm	4 / 1 (46936.001)	4 / 1 (46936.001)	8 / 4 (46936.001)
Network interface	1 RJ45 - 10/100/1000Mbps	1 RJ45 - 10/100/1000 Mbps	2 RJ45 - 10/100/1000Mbps
Hard drive interface	2 SATA (max 8 TB)	2 SATA (max 8 TB)	8 SATA (max 8 TB) 2 E-SATA (max 8 TB)
USB interface	2	2	3 (2x 2.0 + 1 x 3.0)
RS485	Yes	Yes	Yes
PTZ control	Yes	Yes	Yes
CVM	Yes	Yes	Yes
QR CODE	Yes	Yes	Yes
Control via smartphone	Android, iPhone	Android, iPhone	Android, iPhone
Video analysis	Yes *	Yes *	Yes *
Privacy filter	Yes	Yes	Yes
Interface	mouse, remote control	mouse, remote control	mouse, remote control
Power supply/ consumptions (not including PoE and HDD)	+12 V 3 A / 15 W	+12 V 3 A / 15 W	Ac 110/230 V / 15 W (internal power supply unit)
Operating temperature	0 °C ~ +50 °C	0 °C ~ +50 °C	0 °C ~ +50 °C
Cooling fan	Yes	Yes	Yes
Dimensions (mm)	380 x 269 x 52	380 x 269 x 52	445 x 436 x 100
Weight (kg)	1.5 (not including HDD)	1.5 (not including HDD)	4.5 (not including HDD)
Notes	1 rack unit	1 rack unit	2 rack units. Raid configuration 0-1-5-6-10

\* Compatible with cameras with smart video analysis.

USB alarm expansion



Code	46936.001
Connection type	USB
Alarm inputs	16
Alarm outputs	6
USB	USB2.0 x 1
Operating temperature	- 10°C ~ 50°C
Operating humidity	10% ~ 90%
Power supply	5V / 1A
Consumption	≤ 5W

Hard disk for XVR/NVR



**46925.030**  
Professional Hard Disk for CCTV.  
Capacity 3 TB, consumption 5.6 W

SECURITY

ELVEX CCTV : video surveillance system



VIEW IoT smart life

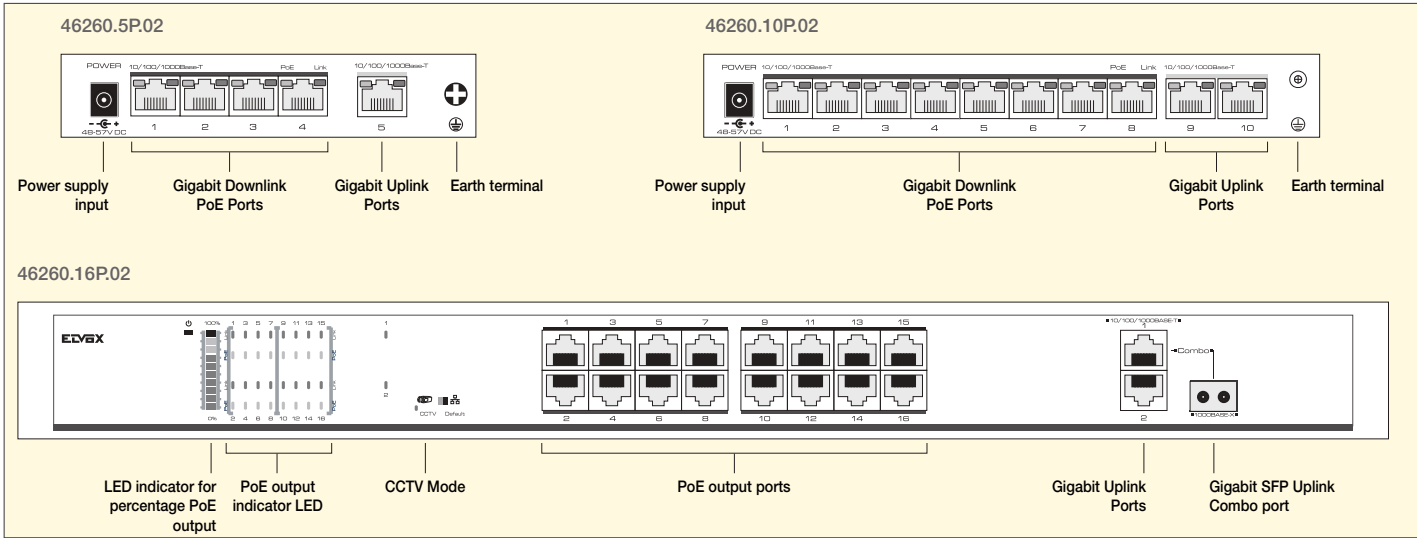


PoE Ethernet switch



Code	46260.5P.02	46260.10P.02	46260.16P.02
Standard PoE	802.3af/at (PoE)	802.3af/at (PoE)	IEEE802.3af/at (PoE)
Ports	5	10	16
Downlink Ports	4 10/100/1000 BASE-T (PoE+)	8 10/100/1000 BASE-T (PoE+)	16 10/100 BASE-TX (PoE+)
Uplink Ports	1 10/100/1000 BASE-T	2 10/100/1000 BASE-T	2 10/100/1000 Base+T+1, 1000 Base-X (combo)
Network standards	IEEE 802.3 IEEE 802.3u IEEE 802.3ab IEEE 802.3x	IEEE 802.3 IEEE 802.3u IEEE 802.3ab IEEE 802.3x	IEEE 802.3 IEEE 802.3u IEEE 802.3ab IEEE 802.3z
Switching capacity	10 Gbit/s	20 Gbit/s	7.2 Gbit/s
Packet switching	7.44 Mp/s	14 Mp/s	5.36 Mp/s
Exchange type	Store and Forward	Store and Forward	No
Buffer	No	1 M	2.75 M
MAC address list	2K	4K	4K
Immunity to transitional overvoltage	6 kV: IEC61000-4-5	6 kV: IEC61000-4-5	6 kV: IEC61000-4-5
Electrostatic discharge (ESD) protection	6 kV (contact discharge) 8 kV (air discharge) According to: IEC61000-4-2	6 kV (contact discharge) 8 kV (air discharge) According to: IEC61000-4-2	6 kV (contact discharge) 8 kV (air discharge) According to: IEC61000-4-2
PoE Power Output (per port)	54 Vdc 30 W max	54 Vdc 30 W max	54 Vdc 30 W max
PoE Total Power	60 W max	120 W max	180 W max
PoE Mode	End-Span	End-Span	End-Span
PoE power supply	1/2(+), 3/6(-)	1/2(+), 3/6(-)	1/2(+), 3/6(-)
Power supply/ consumptions	input: 100-240 Vac, 2 A output: 54 Vdc, 1.11 A	input: 100-240 Vac, 2 A output: 54 Vdc, 1.11 A	100-240 Vac, 2 A
Absorbed power	5 W	5 W	-
Operating temperature	-10° C / +55° C	-10° C / +45° C	-10° C / +45° C
Operating humidity (non-condensing)	5% / 95%	5% / 95%	5% / 95%
Dimensions (mm)	135 x 85.6 x 27	200 x 101.8 x 27	442 x 285 x 44.5
Weight (g)	315 g	500 g	
Notes	CCTV Mode: Downlink ports only communicate with uplink ports	CCTV Mode: Downlink ports only communicate with uplink ports	CCTV Mode: Downlink ports only communicate with uplink ports

Ethernet switch PoE connections



SECURITY

ELVEX CCTV : video surveillance system



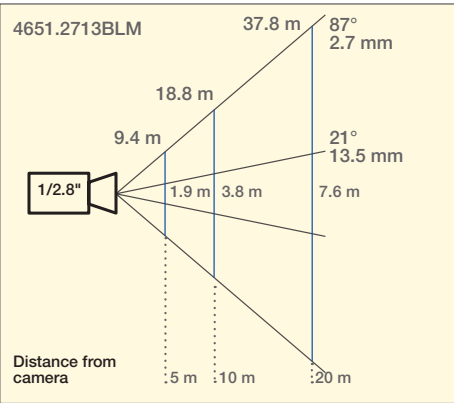
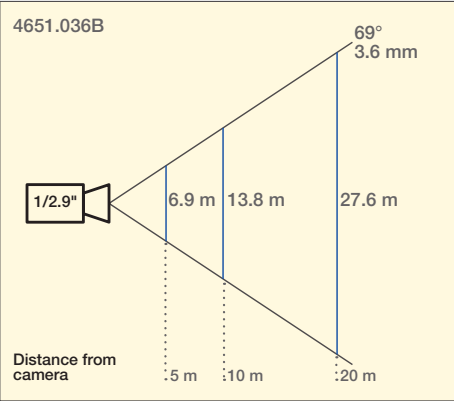
Bullet AHD 2 Mpx cameras (Full-HD)



Low Light without IR

Model	Δ 4651.036B	Δ 4651.2713BLM
Sensor	1/2.9" CMOS	1/2.8" CMOS
Actual pixels	1932 x 1088	1945 x 1097
Resolution	1080p / 720p	1080p
Video output	AHD / TVI / CVI / CVBS	AHD / CVBS
Sensitivity	0 Lux (IR LED ON)	Colour 0.001 lux @F1.3 B&W 0.0001 lux @ F1.3
Day & night	Mechanical ICR	Colour/B&W
Lens	3.6 mm	2.7-13.5 mm Motorised
Viewing angle	69°	87° - 21°
S/N ratio	52 dB	56 dB
Joystick	Yes	Yes
Functions	3DNR, BLC, D-WDR, AGC	DNR, BLC, HLC, D-WDR, AGC, freeze, flip, defog, motion
OSD via CoC	Yes	Yes
Smart IR	18 m	No
IP degree	IP66	IP66
Temperature range	-30°C ~ +60°C	-30°C ~ +60°C
Power supply/ consumptions	12 V 350 mA	12 V 120 mA
Dimensions (mm)	84 x 70 x 167	110 x 84 x 231
Weight (g)	490	720
Pole bracket	46917.004	46917.004
Contact box	46922.030 and 46922.033	46922.030 and 46922.033

Shooting range



Low Light camera (4651.2713BLM)



Shot by standard camera



Shot by Low Light camera

Low Light cameras feature high light sensitivity and can capture clear images and colours, even in low light conditions.



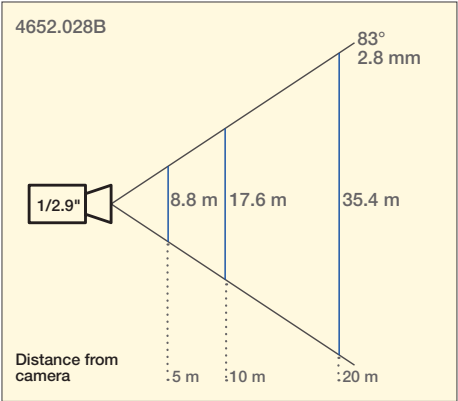


Dome AHD 2 Mpx cameras (Full-HD)



Model	Δ 4652.028B
Sensor	1/2.9" CMOS
Actual pixels	1932 x 1088
Resolution	1080p / 720p
Video output	AHD / TVI / CVI / CVBS
Sensitivity	0 Lux (IR LED ON)
Day & night	Mechanical ICR
Lens	2.8 mm
Viewing angle	83°
S/N ratio	52 dB
Joystick	Yes
Functions	3DNR, BLC, D-WDR, AGC
OSD via CoC	Yes
Smart IR	15 m
IP degree	IP66
Temperature range	-30°C ~ +60°C
Power supply/ consumptions	12 V 350mA
Dimensions (mm)	ø 94 x 80
Weight (g)	320
Pole bracket	46917.004
Contact box	46922.030

Shooting range

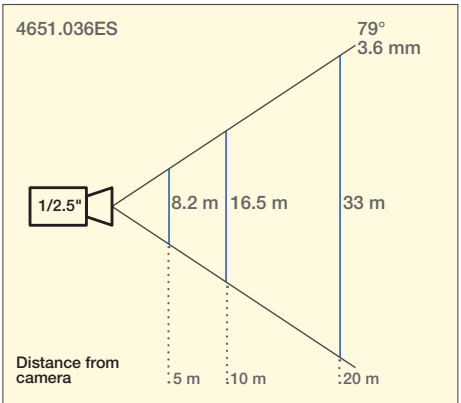
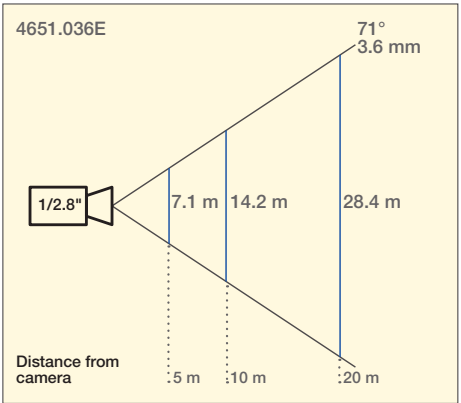
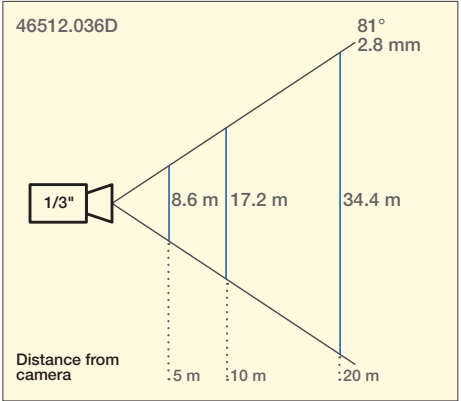


Bullet AHD 4 and 5 Mpx cameras



Model	Δ 46512.036D	Δ 4651.036E	▲ 4651.036ES
Sensor	1/3" CMOS	1/2.8" CMOS	1/2.5" CMOS
Actual pixels	2688 x 1520	2688 x 1944	2592 x 1944
Resolution	4 Mpx	5 Mpx (2560 x 1936) 20 Fps, selectable: 4 Mpx (2560 x 1440) 25 Fps	5 Mpx - (2560 x 1936) 20 Fps, selectable: 4 Mpx - (2688 x 1520) 25 Fps, 2 Mpx - (1920 x 1080) 25 Fps
Sensitivity	0.01 Lux (IR LED ON)	0 Lux (IR LED ON)	0 Lux (IR LED ON)
Lens	3.6 mm	3.6 mm	3.6 mm
Viewing angle	81°	71°	79°
Day & Night	Mechanical ICR	Mechanical ICR	Ext / Auto / B&W / Colour
Video output	AHD	AHD / CVBS	AHD / CVBS / TVI / CVI
Functions	2DNR, BLC, HSBLC, D-WDR, WHITE-BAL, AGC, DPC, mirror	2-3DNR, BLC, D-WDR, AGC, DPC, mirror	2D-DNR, WB, BLC, D-WDR, flip, mirror
S/N ratio	50 dB	54 dB	≥ 42 dB
Joystick	Yes	Yes	No
OSD via CoC	Yes, for OSD menu	Yes	Yes
Smart IR	30 m	18 m	15 m
IP Protection	IP66	IP66	IP66
Temperature range	-10°C / +50°C	-30°C ~ +60°C	-30°C ~ +60°C
Power supply/ consumptions	12 V 350 mA	12 V 400 mA	12 V 400 mA
Dimensions (mm)	ø 67 x 227	84 x 70 x 167	84 x 70 x 167
Weight (g)	460	490	490
Pole bracket	46917.004	46917.004	46917.004
Contact box	46922.015	46922.030 and 46922.033	46922.030 and 46922.033

Shooting range



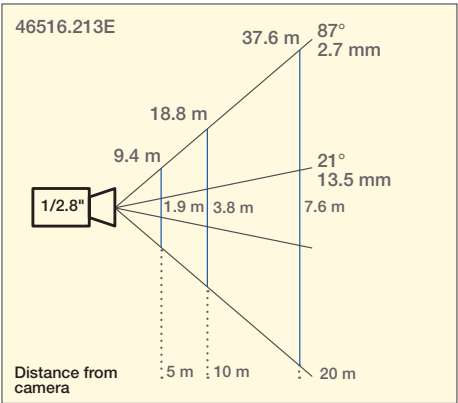
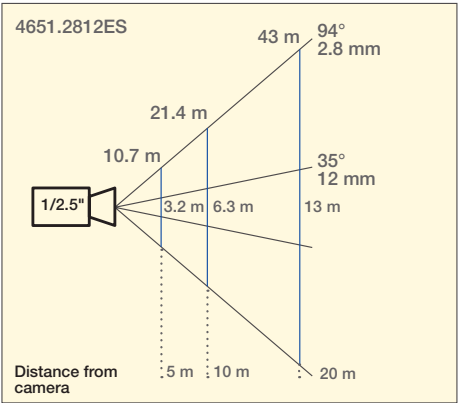


Bullet AHD 5 Mpx cameras



Model	▲ 4651.2812ES	Δ 46516.213E motorised
Sensor	1/2.5" CMOS	1/2.8" CMOS
Actual pixels	2592 x 1944	2688 x 1944
Resolution	5 Mpx - (2560 x 1936) 20 Fps, selectable: 4 Mpx - (2688 x 1520) 25 Fps, 2 Mpx - (1920 x 1080) 25 Fps	5 Mpx (2560 x 1936) 20 Fps, selectable 4 Mpx (2560 x 1440) 25 Fps
Sensitivity	0 Lux (IR LED ON)	0 Lux (IR LED ON)
Lens	2.8 – 12 mm	2.7 – 13.5 mm motorised
Viewing angle	94 ° – 35 °	87 ° – 21 °
Day & Night	Ext / Auto / B&W / Colour	Colour / B&W
Video output	AHD / CVBS / TVI / CVI	AHD / CVBS
Functions	2D-DNR, WB, BLC, D-WDR, flip, mirror	2DNR, BLC, HSBLC, D-WDR, WHITE-BAL, AGC, DPC, mirror
S/N ratio	≥ 42 dB	54 dB
Joystick	No	Yes
OSD via CoC	Yes	Yes
Smart IR	30 m	35 – 40 m
IP Protection	IP66	IP66
Temperature range	-30°C ~ +60°C	-30°C ~ +60°C
Power supply/ consumptions	12 V 400 mA	12 V 650 mA
Dimensions (mm)	90 x 69 x 193	ø 84 x 231
Weight (g)	510	690
Pole bracket	46917.004	46917.004
Contact box	46922.030 and 46922.033	46922.030 and 46922.033

Shooting range

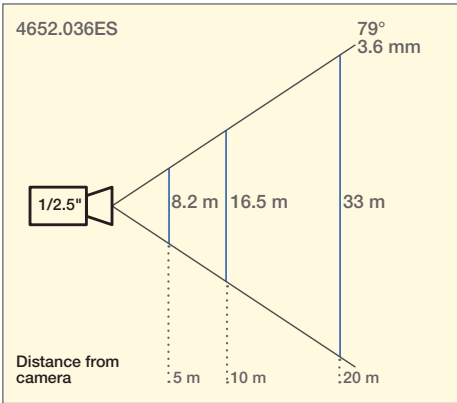
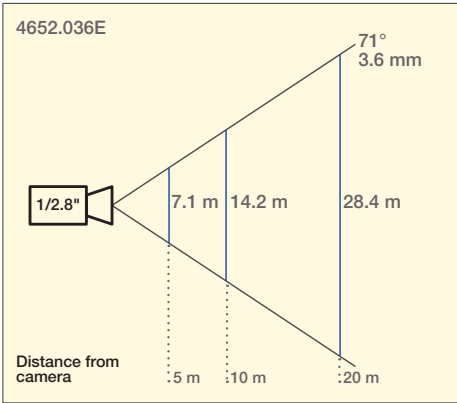


Dome AHD 5 Mpx cameras



Model	Δ 4652.036E	▲ 4652.036ES
Sensor	1/2.8" CMOS	1/2.5" CMOS
Actual pixels	2688 x 1944	2592 x 1944
Resolution	5 Mpx (2560 x 1936) 20Fps, selectable 4 Mpx (2560 x 1440) 25Fps	5 Mpx - (2560 x 1936) 20 Fps, selectable: 4 Mpx - (2688 x 1520) 25 Fps, 2 Mpx - (1920 x 1080) 25 Fps
Video output	AHD / CVBS	AHD / CVBS / TVI / CVI
Sensitivity	0 Lux (IR LED ON)	0 Lux (IR LED ON)
Day & Night	Mechanical ICR	Ext / Auto / B&W / Colour
Lens	3.6 mm	3.6 mm
Viewing angle	71°	79°
S/N ratio	54 dB	≥ 42 dB
Joystick	Yes	No
Functions	2-3DNR, BLC, D-WDR, AGC, DPC, mirror	2D-DNR, WB, BLC, D-WDR, flip, mirror
OSD via CoC	Yes - multilingual	Yes
Smart IR	15 m	15 m
IP Protection	IP66	IP66
Temperature range	-30°C ~ +60°C	-30°C ~ +60°C
Power supply/ consumptions	12 V 400 mA	12 V 250 mA
Dimensions (mm)	ø 94 x 80	ø 94 x 80
Weight (g)	320	320
Pole bracket	46917.004	46917.004
Contact box	46922.030	46922.030

Shooting range





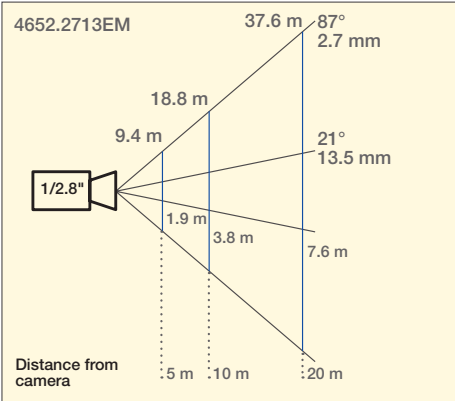
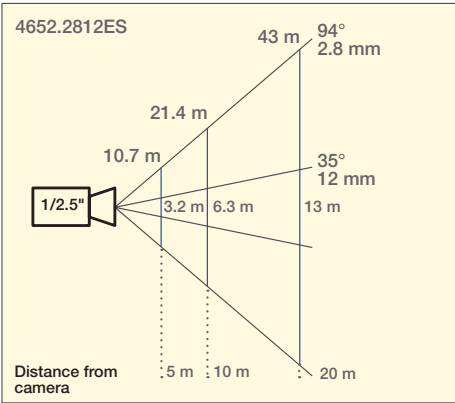


Dome AHD 5 Mpx cameras



Model	▲ 4652.2812ES	Δ 4652.2713EM motorised
Sensor	1/2.5" CMOS	1/2.8" CMOS
Actual pixels	2592 x 1944	2688 (H) x 1944 (V)
Resolution	5 Mpx - (2560 x 1936) 20 Fps, selectable: 4 Mpx - (2688 x 1520) 25 Fps, 2 Mpx - (1920 x 1080) 25 Fps	5 Mpx (2560 x 1936) 20Fps, selectable 4 Mpx (2560 x 1440) 25Fps
Video output	AHD / CVBS / TVI / CVI	AHD / CVBS
Sensitivity	0 Lux (IR LED ON)	0 Lux (IR LED ON)
Day & Night	Ext / Auto / B&W / Colour	Mechanical ICR
Lens	2.8-12 mm	2.7-13.5 mm motorised
Viewing angle	94 ° – 35 °	87° – 21°
S/N ratio	≥ 42 dB	54 dB
Joystick	No	Yes
Functions	2D-DNR, WB, BLC, D-WDR, flip, mirror	2-3DNR, BLC, D-WDR, AGC, DPC, mirror
OSD via CoC	Yes	Yes
Smart IR	30 m	20 m
IP Protection	IP66	IP66
Temperature range	-30°C ~ +60°C	-30°C ~ +60°C
Power supply/ consumptions	12 V 400 mA	12 V 500 mA
Dimensions (mm)	ø 120 x 100	ø 120 x 100
Weight (g)	550	610
Pole bracket	46917.004	46917.004
Contact box	46922.031, 46922.032 and 46922.033	46922.032 and 46922.033

Shooting range

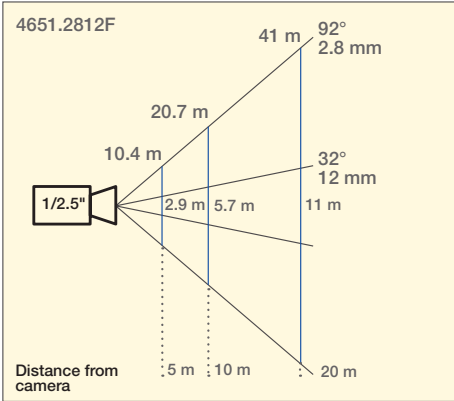
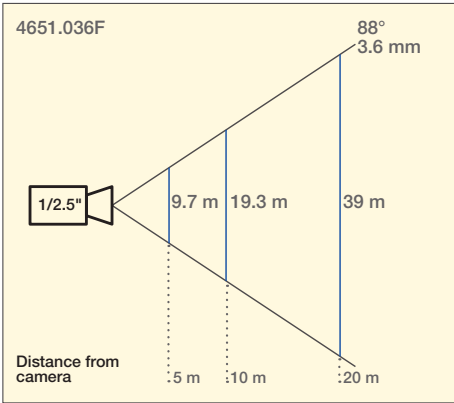


Bullet AHD 8 Mpx cameras



Model	▲ 4651.036F	▲ 4651.2812F
Sensor	1/2.5" CMOS	1/2.5" CMOS
Actual pixels	3840 x 2160	3840 x 2160
Resolution	8 Mpx - (3840 x 2160) 15 Fps, selectable: 5 Mpx - (2592 x 1944) 20 Fps 4 Mpx - (2688 x 1520) 25 Fps, 2 Mpx - (1920 x 1080) 25 Fps	8 Mpx - (3840 x 2160) 15 Fps, selectable: 5 Mpx - (2592 x 1944) 20 Fps 4 Mpx - (2688 x 1520) 25 Fps, 2 Mpx - (1920 x 1080) 25 Fps
Sensitivity	0 Lux (IR LED ON)	0 Lux (IR LED ON)
Lens	3.6 mm	2.8 – 12 mm
Viewing angle	88°	92 ° – 32 °
Day & Night	Ext / Auto / B&W / Colour	Ext / Auto / B&W / Colour
Video output	AHD / CVBS / TVI / CVI	AHD / CVBS / TVI / CVI
Functions	2D-DNR, WB, BLC, D-WDR, flip, mirror	2D-DNR, WB, BLC, D-WDR, flip, mirror
S/N ratio	≥ 42 dB	≥ 42 dB
Joystick	No	No
OSD via CoC	Yes	Yes
Smart IR	15 m	30 m
IP Protection	IP66	IP66
Temperature range	-30°C ~ +60°C	-30°C ~ +60°C
Power supply/ consumptions	12 V 400 mA	12 V 400 mA
Dimensions (mm)	84 x 70 x 167	90 x 69 x 193
Weight (g)	490	510
Pole bracket	46917.004	46917.004
Contact box	46922.030 and 46922.033	46922.030 and 46922.033

Shooting range



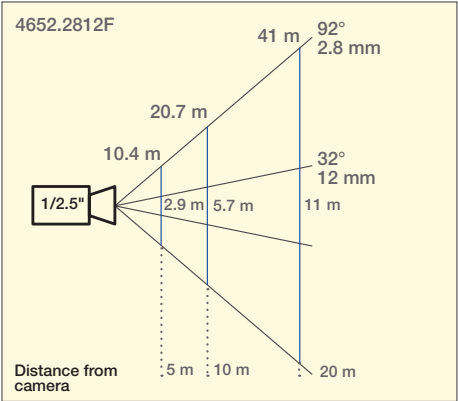
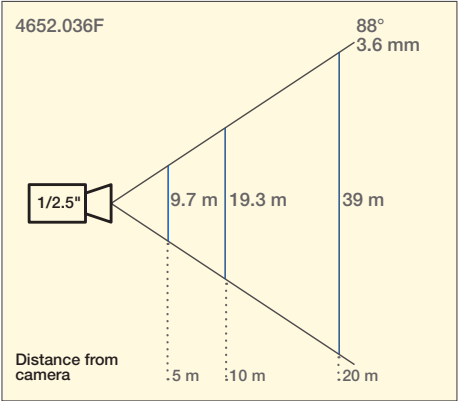


Dome AHD 8 Mpx cameras



Model	▲ 4652.036F	▲ 4652.2812F
Sensor	1/2.5" CMOS	1/2.5" CMOS
Actual pixels	3840 x 2160	3840 x 2160
Resolution	8 Mpx - (3840 x 2160) 15 Fps, selectable: 5 Mpx - (2592 x 1944) 20 Fps 4 Mpx - (2688 x 1520) 25 Fps, 2 Mpx - (1920 x 1080) 25 Fps	8 Mpx - (3840 x 2160) 15 Fps, selectable: 5 Mpx - (2592 x 1944) 20 Fps 4 Mpx - (2688 x 1520) 25 Fps, 2 Mpx - (1920 x 1080) 25 Fps
Video output	AHD / CVBS / TVI / CVI	AHD / CVBS / TVI / CVI
Sensitivity	0 Lux (IR LED ON)	0 Lux (IR LED ON)
Day & Night	Ext / Auto / B&W / Colour	Ext / Auto / B&W / Colour
Lens	3.6 mm	2.8 – 12 mm
Viewing angle	88°	92° – 32°
S/N ratio	≥ 42 dB	≥ 42 dB
Joystick	No	No
Functions	2D-DNR, WB, BLC, D-WDR, flip, mirror	2D-DNR, WB, BLC, D-WDR, flip, mirror
OSD via CoC	Yes	Yes
Smart IR	15 m	30 m
IP Protection	IP66	IP66
Temperature range	-30°C ~ +60°C	-30°C ~ +60°C
Power supply/ consumptions	12 V 250 mA	12 V 400 mA
Dimensions (mm)	ø 94 x 80	ø 120 x 100
Weight (g)	320	550
Pole bracket	46917.004	46917.004
Contact box	46922.030	46922.031, 46922.032 and 46922.033

Shooting range

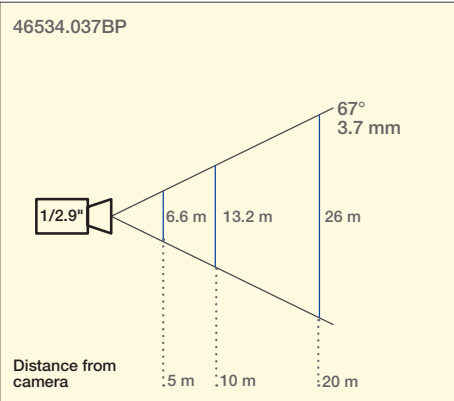
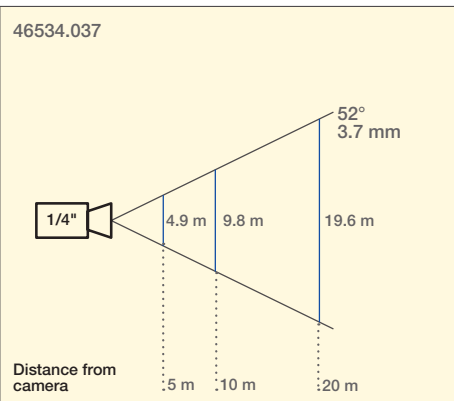


Special cameras



Model	46534.037	46534.037BP
Sensor	1/4" CMOS	1/2.9" CMOS
Actual pixels	1296 (H) x 732 (V)	1985 x 1105
Horizontal resolution	720p 25Fps	1080p 25Fps
Video output	AHD	AHD
Sensitivity	1 Lux	0.01 Lux Colour / 0.001 Lux B&W
Day & night	Electronic ICR	Colour/B&W
Lens	3.7 mm	3.7 mm
Viewing angle	52°	67°
S/N ratio	50 dB	52 dB
OSD	No	No
CVBS output	No	No
Joystick	No	No
Functions	AGC, BLC, NR	2D, 3DNR, BLC, HSBL, LSC, D-WDR, WB, AGC, DPC, mirror, motion, privacy, defog
CoC	No	Yes
Smart IR	No	No
IP degree	No	IP55
Temperature range	-10°C / +50°C	-30°C ~ +45°C
Power supply/ consumptions	12 V 100 mA	12 V 95 mA
Dimensions (mm)	150 x 30 x 60	45 x 39 x 24
Weight (g)	166	74

Shooting range





SECURITY

ELVEX CCTV : video surveillance system



DVR AHD 5 Mpx



Model	▲ 46XVR.ES04	46XVR.ES08	46XVR.E16
Video compression	H.264 - H.265	H.264 - H.265	H.264 - H.265
Operating mode	Pentaplex	Pentaplex	Pentaplex
Video input *	BNC x 4 *	BNC x 8 *	BNC x 16 *
Video output	HDMI: 1920 x 1080, 1280 x 1024, 1024 x 768 VGA: 1920 x 1080, 1280 x 1024, 1024 x 768 BNC: CVBS (MAIN or SPOT)	HDMI: 1920x1080, 1280x1024, 1024x768 VGA: 1920x1080, 1280x1024, 1024x768 BNC: CVBS (MAIN or SPOT)	HDMI: 1920 x 1080, 1280 x 1024, 1024 x 768 VGA: 1920 x 1080, 1280 x 1024, 1024 x 768 BNC: CVBS (MAIN or SPOT)
Audio input/output	RCA x 1 / RCA x 1	RCA x 1 / RCA x 1	RCA x 8 / RCA x 1
AHD/TVI/CVI recording resolution	5 Mpx Lite 10fps 4 Mpx Lite/1080p 12fps 1080p Lite/720p/WD1/D1 25fps	5 Mpx Lite 10fps 4 Mpx Lite/1080p 12fps 1080p Lite/720p/WD1/D1 25fps	5 Mpx Lite 10fps 4 Mpx Lite/1080p 12fps 1080p Lite/720p/WD1/D1 25fps
Number of IP cameras that can be connected to DVR (via external switch)	2 in addition to the 4 analogue cameras	4 in addition to the 8 analogue cameras	8 in addition to the 16 analogue cameras
IP camera recording resolution	5 Mpx 25 fps	5 Mpx 25 fps	5 Mpx 25 fps
Input/output alarm	(46936.001)	(46936.001)	16 / 4 (46936.001)
OSD camera control over coaxial	Yes	Yes	Yes
Network interface	1 RJ45 - 100 Mbps	1 RJ45 - 100 Mbps	1 RJ45 - 1000 Mbps
Hard drive interface	1 SATA (max 10 TB)	1 SATA (max 10 TB)	2 SATA, 1 E-SATA (max 10 TB)
HDD	1 TB Professional	1 TB Professional	2 TB Professional
USB interface	2 USB 2.0	2 USB 2.0	2 USB 2.0
RS485 PTZ control	Yes	Yes	Yes
QR CODE	Yes	Yes	Yes
Control via Smartphone	Android and iPhone with App By-Camera	Android and iPhone with App By-Camera	Android and iPhone with App By-Camera
OTA Firmware Update	Yes	Yes	Yes
Video analysis with analogue cameras (XVR function)	Line crossing, area intrusion	Line crossing, area intrusion	Line crossing, area intrusion
Video analysis with IP cameras ** (if present)	Video anomaly, line crossing, abandoned or removed object, area intrusion	Video anomaly, line crossing, abandoned or removed object, area intrusion	Video anomaly, line crossing, abandoned or removed object, area intrusion
Privacy filter	Yes	Yes	Yes
Interface	mouse, remote control	mouse, remote control	mouse, remote control
Power supply/ consumptions	12V / 15W	12V / 15W	12V / 25W
Operating temperature	-10 / + 50°C	-10 / + 50°C	-10 / + 50°C
Cooling fans	No	No	No
Dimensions (mm)	255 x 222 x 42	255 x 222 x 42	300 x 268 x 48
Weight (kg)	1.12	1.15	1.8
Notes	RTSP ***	RTSP ***	RTSP ***

**Note:** with the 1.3.8 firmware, XVRs (46XVR.ES04, 46XVR.ES08 and 46XVR.E16) are also compatible with browsers other than Explorer without the need to install plug-ins (Edge, Firefox, Chrome, Safari and Opera).  
\* Not compatible with 3 Mpx AHD cameras.  
\*\* Compatible with cameras with smart video analysis.  
\*\*\* **RTSP:** function for direct connection to the By-me Plus home automation system or as an additional camera for IP video door entry systems.

By-camera App available from the Vimar website or Apple Store and Google Play

SECURITY

ELVEX CCTV : video surveillance system



DVR AHD 8 Mpx



Model	▲ 46XVR.FS04	▲ 46XVR.FS08
Video compression	H.264 - H.265	H.264 - H.265
Operating mode	Pentaplex	Pentaplex
Video input	BNC x 4	BNC x 8
Video output	HDMI: 3840 x 2160, 1920 x 1080, 1280 x 1024 VGA: 1920 x 1080, 1280 x 1024, 1024 x 768 BNC: CVBS (MAIN or SPOT)	HDMI: 3840 x 2160, 1920 x 1080, 1280 x 1024 VGA: 1920 x 1080, 1280 x 1024, 1024 x 768 BNC: CVBS (MAIN or SPOT)
Audio input/output	RCA x 1 / RCA x 1	RCA x 1 / RCA x 1
AHD/TVI/CVI recording resolution	4K (1 channel only) 7fps 4K Lite/5 Mpx/4 Mpx/3 Mpx 12fps 5 Mpx Lite 20fps 4 Mpx Lite/1080p 25fps	4K 8fps 4K Lite/5 Mpx/4 Mpx/3 Mpx 12fps 5 Mpx Lite 20fps 4 Mpx Lite/1080p 25fps
Number of IP cameras that can be connected to DVR (via external switch)	2 in addition to the 4 analogue cameras	8 in addition to the 8 analogue cameras
IP camera recording resolution	8 Mpx 20 fps 5 Mpx 25 fps	8 Mpx 25 fps
Input/output alarm	(46936.001)	(46936.001)
OSD camera control over coaxial	Yes	Yes
Network interface	1 RJ45 - 100 Mbps	1 RJ45 - 100 Mbps
Hard drive interface	1 SATA (max 10 TB)	1 SATA (max 10 TB)
HDD	1 TB Professional	1 TB Professional
USB interface	2 USB 2.0	2 USB 2.0
RS485 PTZ control	Yes	Yes
QR CODE	Yes	Yes
Control via Smartphone	Android and iPhone with App By-Camera	Android and iPhone with App By-Camera
OTA Firmware Update	Yes	Yes
Video analysis with analogue cameras (XVR function)	Line crossing, area intrusion	Line crossing, area intrusion
Video analysis with IP cameras ** (if present)	Video anomaly, line crossing, abandoned or removed object, area intrusion	Video anomaly, line crossing, abandoned or removed object, area intrusion
Privacy filter	Yes	Yes
Interface	mouse, remote control	mouse, remote control
Power supply/ consumptions	12V / 15W	12V / 15W
Operating temperature	-10 / + 50°C	-10 / + 50°C
Cooling fans	No	Yes
Dimensions (mm)	255 x 222 x 42	255 x 234 x 42
Weight (kg)	1.12	1.25
Notes	RTSP ***	RTSP ***

**Note:** XVRs (46XVR.FS04 and 46XVR.FS08) are also compatible with browsers other than Explorer without the need to install plug-ins (Edge, Firefox, Chrome, Safari and Opera).  
\*\* Compatible with cameras with smart video analysis.  
\*\*\* **RTSP:** function for direct connection to the By-me Plus home automation system or as an additional camera for IP video door entry systems.

USB alarm expansion



Code	46936.001			
Connection type	USB	USB	USB2.0 x 1	Power supply 5V / 1A
Alarm inputs	16	Operating temperature	- 10°C ~ 50°C	Consumption ≤ 5W
Alarm outputs	6	Operating humidity	10% ~ 90%	



1080p hybrid DVRs manageable from 10” multimedia video touch screen of home automation system (21553.2)



Model	Δ 46540.H16
Video input	16 BNC, AHD/IP/TVI/CVI/CVBS +4 IP (maximum 12 IP Ch)
PoE ports	Not present
HDD	1 TB Professional
Recording resolution	FullHD 1080p: 12.5 Fps 1080p LITE (AHD) or HD 720p (AHD) or WD1 (analogue): 25 Fps
IP camera recording resolution	3 Mpx 12.5 Fps 1080p 25 Fps 720p 25 Fps
VGA/HDMI resolution	1080p (1920x1080)
Video compression	H.264
Operating mode	PENTAPLEX
Video output	1 HDMI, 1 VGA, 1 BNC
Audio in/out	4 RCA / 1 RCA
Alarm in/out	4 / 1
OSD camera control over coaxial (CoC)	Yes
Network interface	1 RJ45 - 10/100 Mbps
Hard drive interface	2 SATA, 3 TB max
USB interface	2
RS485 PTZ control	Yes
QR CODE	Yes
Control via smartphone	Android and iPhone with APP
Video analysis	No
Privacy filter	Yes
Interface	Mouse, remote control
Power supply/ consumptions (not including HDD)	12 V 4 A 15 W
Operating temperature	0° C / +50 °C
Cooling fans	Yes
Dimensions (mm)	380 x 268 x 52
Weight (kg)	1.8 (not including HDD)
Notes	RTSP **

1080p LITE: the DVR records smooth video (25 fps) by reducing the number of pixels.  
\*\* RTSP: function for direct connection to the By-me Plus home automation system or as an additional camera for IP video door entry systems.



IP CCTV kit - 8 and 16 channels



**46KIT.2812E**  
CCTV kit consisting of:  
1 8-channel NVR, H.265 compression, 8ch@6Mpx Real Time recording, built-in 8-port PoE switch, remote control and viewing, remote connection with QR CODE, 1 TB professional HDD, Plug&Play configuration  
2 **4621.2812EMS**: colour Day & Night cameras, 5 Mpx, mechanical IR filter, with 2.8–12 mm varifocal lens  
1 **46927.001**: ' Area under video surveillance ' sign



**46KIT.1634E**  
CCTV kit consisting of:  
1 16-channel NVR, H.265 compression, 16ch@8Mpx Real Time recording, remote viewing and control, remote connection with QR CODE professional 2 TB HDD  
1 **46234.010E.67**: colour Day & Night cameras, 5 Mpx, mechanical IR filter, with 1.07 mm fixed optical lens with 360° view  
1 **46927.001**: ' Area under video surveillance ' sign

AHD CCTV kit - 4 and 8 channels



**46554.036E**  
CCTV kit consisting of:  
1 **46XVR.ES04**: Hybrid DVR with 4+2 AHD/IP/CVBS channels, compatible with 2 additional IP cameras, professional 1 TB HDD, Pentaplex, H.265, CoC, supports AHD and IP up to 5Mpx;  
2 **4651.036ES**: Bullet 5 Mpx AHD cameras with 3.6 mm fixed lens, D&N with mechanical IR filter;  
2 **46902.010**: 12 Vdc - 1A plug-in power supply units;  
1 **46927.001**: ' Area under video surveillance ' sign.




**46558.2812E**  
CCTV kit consisting of:  
1 **46XVR.ES08**: Hybrid DVR with 8+4 AHD/IP/CVBS channels, compatible with 4 additional IP cameras, professional 1 TB HDD, Pentaplex, H.265, CoC, supports AHD and IP up to 5Mpx;  
2 **4651.2812ES**: Bullet 5 Mpx AHD cameras with 2.8–12 mm varifocal lens, D&N with mechanical IR filter;  
2 **46902.010**: 12 Vdc - 1A plug-in power supply units;  
1 **46927.001**: ' Area under video surveillance ' sign.

Monitor




Code	46910.H10A.01	46910.H20A	Δ 46910.H32A	46910.43K
Shield	10.1" Monitor with LED Backlight	19.5" Monitor with LED Backlight	32" Monitor with LED Backlight	43" Monitor with LED Backlight
Resolution	1280 x 800	1920 x 1080	1920 x 1080	3840 x 2160
Profile ratio	16:9	16:9	16:9	16:9
Brightness (NIT)	330 cd/m²	250 cd/m²	400 cd/m²	390 cd/m²
Contrast ratio	800:1	500:1	3000:1	1000:1
Viewing angle	160° x 160°	170° x 160°	178° x 178°	178° x 178°
Response time	12 ms	5 ms	5 ms	6 ms
Video inputs	HDMI x 1 VGA x 1 BNC x 1 in BNC x 1 out	HDMI x 1 VGA x 1 BNC x 1 in BNC x 1 out	HDMI x 1 VGA x 1 BNC x 1 in BNC x 1 out	HDMI v2.0 x 1 HDMI v1.4 x 2 DP x 1
Audio input/output	1	1	1	1 output
Power supply	12 Vdc 12 W with standard power supply unit	12 Vdc 30 W with standard power supply unit	100 – 240 Vac 65 W	100 – 240 Vac 75 W
Vesa fixing	Yes	Yes	Yes	Yes
Table support bracket	Yes	Yes	Yes, metal	Yes, metal
Dimensions (mm)	250 x 175 x 35	485 x 375 x 50	745 x 495 x 55	970 x 560 x 100
Weight (kg)	1.3	2.8	10.5	16.8


Passive transducers (AHD)




**46862.001.01**  
Balun video passive transducer for video transmission on twisted pair, BNC connector for connection to the camera or DVR, screw connection for the cable



**46862.A01.01**  
Balun passive video transducer for video transmission over twisted pair, BNC connector with 14 cm of cable for connection to the camera or DVR, screw connection for the cable




**46862.B02**  
Pair of passive video transducers for video transmission over twisted pair, BNC connector for connection to the camera or DVR, one transducer with 14 cm of cable, screw connection for the cable




**46862.B01**  
Pair of Balun passive video transducers (transmitter/receiver) for video transmission over twisted pair, BNC connector for the video, jack for the power supply, cable connection with RJ45 connector, maximum distance attainable with Cat. 5 cable 50 m, compatible with PAL/ NSC/SECAM, built-in electrostatic discharge protection


Connectors and cables




**46904.C01**  
Male BNC crimp connector for RG59 coaxial cables




**46904.S01**  
Male BNC solder connector for coaxial cable with metal body and cable outlet coil




**46904.M01**  
Male BCN connector for coaxial cable with screw terminals



**46905.M01**  
Plug connector for 12 VDC power supply with screw terminals




**46905.M02**  
Female plug connector for 12 VDC power supply with screw terminals




**46904.V01**  
Male BNC connector for coaxial cable, screw terminals, metal body

Power supply units



**46902.010**  
Switching-mode power supply unit, 100 – 240 Vac 50/60 Hz, integrated Europlug 2P plug, output with standard jack connector 12 Vdc 1 A, maximum power 12 W



**46901.015**  
Flush mounting switching mode power supply unit, 100 – 240 Vac 50/60 Hz power supply, 12 Vdc 1.5 A output with standard jack connector, maximum power 18 W, installation in switchboards, junction boxes or watertight enclosures

Hard disk for XVR/NVR



**46925.030**  
Professional Hard Disk for CCTV. Capacity 3 TB, consumption 5.6 W

Accessories



**46264.001.01**  
IEEE802.3aT/AT standard PoE 10/100 Ethernet Extender, up to 100 m connection, max 3 devices per section



**46264.002**  
Passive overvoltage protection for Ethernet line with or without PoE. RJ45 in/out connection



**46936.001**  
USB alarm expansion module for NVR and XVR, 16 inputs and 6 outputs

Keypad for PTZ and DVR control



**46916.005**  
Control keypad for Speed Dome cameras, with 3-axis Pelco D, Pelco P Protocol, standard 12 Vdc 2 A power supply unit. Dimensions: 220x130x90 mm



**46916.004**  
IP keypad for controlling IP PTZ, controls 10 devices simultaneously, 3-axis control. Standard 12 Vdc power supply unit.



**Δ 46916.001**  
RS485 keypad for PTZ control and DVR management, multi-protocol, 8 devices in cascade (in-out) 4-line display, 3-axis control, 12V power supply unit.

Microphone



**46964.003**  
Microphone for audio applications, compatible with the entire range of cameras powered at 12Vdc

Cables



**0002.060.E**  
75 ohm coaxial cable, cable ø 3 mm, with PVC sheath, CPR Eca class, suitable for installation with Category I power cables (U0 = 400 V), grey - 200 m spool



**0002.063.E**  
Video system cable, 2x0.35 mm<sup>2</sup> + 75 ohm coaxial cable, with PVC sheath, CPR Eca class, suitable for installation with Category I power cables (U0 = 400 V), grey - 200 m spool



**0002.163.E**  
Video system cable, 2x0.75 mm<sup>2</sup> + 75 ohm coaxial cable, with PVC sheath, CPR Eca class, suitable for installation with Category I power cables (U0 = 400 V), grey - 200 m spool



**46364.E.100**  
Coaxial cable for indoor laying, ø 3.3 mm, with LSZH sheath, CPR Eca class, suitable for installation with Category I power cables (U0 = 400 V), brown - 100 m spool



**46364.E.500**  
Coaxial cable for outdoor laying, ø 6.3 mm, with LSZH sheath, CPR Eca class, suitable for installation with Category I power cables (U0 = 400 V), brown - 500 m spool

Maximum recommended transmission distance

Resolution	Coaxial cable				Network cable	
	RG59	0002.163.E (coaxial with power supply)	46364.E.100 (high-quality 3.3 mm coaxial for indoor laying)	46364.E.500 (high-quality 6.3 mm co-axial for outdoor laying)	Passive baluns (in the analogue range)	Active baluns (in the analogue range)
720p AHD	400 m	40 m @ 700 mA (limit due to the power supply)	300 m	400 m	300 m	Use not allowed
1080p AHD	300 m	40 m @ 700 mA (limit due to the power supply)	200 m	300 m	250 m	Use not allowed
3 Mpx	200 m	40 m @ 700 mA (limit due to the power supply)	150 m	250 m	200 m	Use not allowed
4 Mpx	200 m	40 m @ 700 mA (limit due to the power supply)	150 m	250 m	100 m	Use not allowed
5 Mpx	150 m	40 m @ 700 mA (limit due to the power supply)	100 m	200 m	100 m	Use not allowed
4K	150 m	40 m @ 700 mA (limit due to the power supply)	100 m	200 m	100 m	Use not allowed

Exceeding these distances may progressively degrade the signal quality.



ELVEX CCTV : completion devices

Brackets and supports for Bullet and Dome IP cameras



**46922.040**  
Bracket with contact box for Dome and Bullet IP cameras for surface or ceiling mounting.



**46922.041**  
Bracket with contact box for Dome and Bullet IP cameras for surface or ceiling mounting.



**46922.042**  
Bracket with contact box for Dome varifocal IP cameras for surface or ceiling mounting.



**46922.019**  
Bracket with contact box for Fisheye IP cameras for surface or ceiling mounting



**46917.005**  
Pole bracket suitable for IP cameras

Brackets and supports for Bullet and Dome AHD cameras



**46922.030**  
Bracket with contact box for Bullet AHD cameras 46516.213E and 46516.650B for surface or ceiling mounting.



**46922.031**  
Contact box for Dome varifocal AHD cameras for surface or ceiling mounting.



**46922.032**  
Bracket for Dome varifocal AHD cameras for surface or ceiling mounting.
















**Δ 46922.033**  
Contact box for AHD cameras suitable to contain wiring and power supply unit, IP66



**46917.004**  
Pole bracket for cameras Fixed and variable focus AHD

ELVEX CCTV : compatibility table for boxes and cameras




Bullet IP cameras

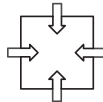
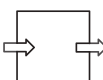

Bullet IP cameras		 46917.002.01 Pole bracket	 46917.005 Pole bracket	 Δ 46922.014 Bracket with contact box	 46922.040 Bracket with contact box	 46922.041 Bracket with contact box
	4621.028B		X		X	
	4621.028BA		X		X	
	4621.028EA		X		X	
	4621.036E		X		X	
	4621.2812B		X		X	
	4621.2812BA		X		X	
	4621.2812DA		X		X	
	4621.2812ESA		X		X	
	4621.028FS		X		X	
	4621.028FSA		X		X	
	4621.2812FMA		X		X	
	4621.2812FMS		X		X	
	4621.2812EDT		X		X	
	4621.0722DMA		X			X
	4621.2812EAE		X			X
	4621.2812EMS		X		X	
	46212.036F	X		X		
	46216.212BL	X		X		
	46917.005				X	X

Dome IP cameras						
Dome IP cameras		 46917.005 Pole bracket	 46922.040 Bracket with contact box	 46922.041 Bracket with contact box	 46922.042 Bracket with contact box	 46922.019 Bracket with contact box
	4622.028BA		X			
	4622.028EA		X			
	4622.028FS		X			
	4622.028FSA		X			
	4622.2812B			X		
	4622.2812EMS			X		
	4622.2812FMS			X		
	4622.2812BA			X		
	4622.2812DA			X		
	4622.2812ESA			X		
	4622.2812FMA			X		
	4622.2812EDT			X		
	4624.028EAE	X				
	4624.036EA	X				
	4622.2812EAE				X	
	4622.2812FKA				X	
	4622.3312EMA				X	
	46235.180PAN				X	
	46234.010E.67					X
	46917.005		X	X	X	X

Bullet AHD cameras				
Bullet AHD cameras		 46917.004 Pole bracket	 46922.030 Bracket with contact box	 Δ 46922.033 Bracket with contact box
	4651.036B	X	X	X
	4651.036E	X	X	X
	4651.036ES	X	X	X
	4651.036F	X	X	X
	4651.2713BLM	X	X	X
	46512.036D	X		
	4651.2812ES	X	X	X
	4651.2812F	X	X	X
	46516.213E	X	X	X
	46917.004		X	

Dome AHD camera box compatibility						
Dome AHD cameras		 46917.004 Pole bracket	 46922.030 Bracket with contact box	 46922.031 Bracket with contact box	 46922.032 Surface mounting bracket	 Δ 46922.033 Bracket with contact box
	4652.028B	X	X			
	4652.036E	X	X			
	4652.036ES	X	X			
	4652.036F	X	X			
	4652.2812ES	X		X	X	X
	4652.2812F	X		X	X	X
	4652.2713EM	X		X	X	X
	46917.004		X	X		





Video analysis functions 1						
	 Video anomaly (fault or tampering)		 Line crossing		 Abandoned or removed item	
NVR	Cameras					
46NVR.04PS / 46NVR.08PS	List 1:				List 2:	
46NVR.08P / 46NVR.16P	4621.028B	4621.2812EDT	4622.028EA	4622.2812FKA	4621.028B	4622.2812BA
46NVR.16 / 46NVR.32 / 46NVR.64	4621.028BA	4621.2812ESA	4622.2812EAE	4624.028EAE	4621.028BA	4622.2812DA
	4621.2812BA	4621.028FSA	4622.2812EDT	4624.036EA	4621.2812BA	4622.028EA
46KIT.2812E	4621.0722DMA	4621.2812FMA	4622.2812ESA	46235.015B	4621.2812DA	4622.2812EAE
46KIT.1634E	4621.2812DA	4622.028BA	4622.3312EMA	46235.030D	4621.028EA	4622.2812ESA
	4621.028EA	4622.2812BA	4622.028FSA	46235.180PAN	4621.2812EAE	4622.3312EMA
	4621.2812EAE	4622.2812DA	4622.2812FMA		4621.2812ESA	4624.028EAE
					4622.028BA	
DVR/XVR	Cameras					
46540.H16	No				No	
46XVR.ES04 / 46XVR.ES08	List 1				List 2	
46XVR.E16						
46XVR.FS04 / 46XVR.FS08						
Software	Cameras					
CVM-Elvox	No				No	
CVM CCTV Manager	List 1				List 2	
Other	Cameras					
Standalone mode	List 1				List 2	

Video analysis functions 2				
	 Area intrusion		 Enter the area, exit the area	 Vehicle/person count
NVR	Cameras			
46NVR.04PS / 46NVR.08PS	List 3:			List 4:
46NVR.08P / 46NVR.16P	4621.028B	4621.2812EDT	4622.028EA	4622.2812FKA
46NVR.16 / 46NVR.32 / 46NVR.64	4621.028BA	4621.2812ESA	4622.2812EAE	4624.028EAE
	4621.2812BA	4621.028FSA	4622.2812EDT	4624.036EA
46KIT.2812E	4621.0722DMA	4621.2812FMA	4622.2812ESA	46235.015B
46KIT.1634E	4621.2812DA	4622.028BA	4622.3312EMA	46235.030D
	4621.028EA	4622.2812BA	4622.028FSA	46235.180PAN
	4621.2812EAE	4622.2812DA	4622.2812FMA	
DVR/XVR	Cameras			
46540.H16	No			No
46XVR.ES04 / 46XVR.ES08	List 3			List 4
46XVR.E16				
46XVR.FS04 / 46XVR.FS08				
Software	Cameras			
CVM-Elvox	No			No
CVM CCTV Manager	List 3			List 4
Other	Cameras			
Standalone mode	List 3			List 4



ELVAX CCTV : compatibility table for boxes and cameras

ELVAX TVCC : characteristics

Video analysis functions 3					
	 Heat map	 Metadata	 Facial detection and recognition	 Facial recognition (with database)	
NVR		Cameras			
46NVR.04PS / 46NVR.08PS	<b>List 6:</b> 4621.2812EAE 4622.2812EAE 4624.028EAE	<b>List 7:</b> 4621.2812EAE 4622.2812EAE 4624.028EAE	<b>List 8:</b> 4621.0722DMA 4624.036EA 4621.2812EAE 46235.015B 4622.2812EAE 46235.030D 4622.3312EMA 46235.180PAN 4624.028EAE		No
46NVR.08P / 46NVR.16P					
46NVR.16 / 46NVR.32 / 46NVR.64					
46KIT.2812E					
46KIT.1634E					
				<b>List 9:</b> 4621.0722DMA 4624.036EA 4621.2812EAE 46235.015B 4622.2812EAE 46235.030D 4622.3312EMA 46235.180PAN 4624.028EAE	
DVR/XVR		Cameras			
46540.H16	No	No	No	No	
46XVR.ES04 / 46XVR.ES08					
46XVR.E16					
46XVR.FS04 / 46XVR.FS08					
Software		Cameras			
CVM-Elvox	No	No	No	No	
CVM CCTV Manager			<b>List 8</b>	<b>List 9</b> (requires 46KIT.1634E)	
Other		Cameras			
Standalone mode	<b>List 6</b>	<b>List 7</b>	<b>List 8</b>	46235.015B 46235.030D 46235.180PAN	

NVR characteristics, with alarm input and camera compatibility							
NVR	No. of channels	In/out alarms	No. of PoE	Video analysis	Fisheye	Camera sensor (resolution)	
						up to 5 Mpx (2592 x 1944)	up to 8 Mpx (3840 x 2160)
46NVR.04PS	4	46936.001	4	Yes	No	Yes	No
46NVR.08P	8	46936.001	8	Yes	No	Yes	Yes
46NVR.08PS	8	46936.001	8	Yes	No	Yes	No
46NVR.16P	16	46936.001	16	Yes	No	Yes	Yes
46NVR.16	16	4/1	-	Yes	No	Yes	Yes
46NVR.32	32	4/1	-	Yes	No	Yes	Yes
46NVR.64	64	8 / 4	-	Yes	Yes	Yes	Yes

DVR/XVR characteristics, with alarm input and camera compatibility								
DVR/XVR	No. of channels	In/out alarms	Camera resolution					
			720p	1080p	3 Mpx	4 Mpx	5 Mpx	8 Mpx
46540.H16	16	4 / 1	Yes	Yes	No	No	No	No
46XVR.ES04	4	46936.001	Yes	Yes	No	Yes	Yes	No
46XVR.ES08	8	46936.001	Yes	Yes	No	Yes	Yes	No
46XVR.FS04	4	46936.001	No	Yes	Yes	Yes	Yes	Yes
46XVR.FS08	8	46936.001	No	Yes	Yes	Yes	Yes	Yes

IP camera characteristics, with alarm input							
Bullet (varifocal)				Dome (varifocal)			
Cameras	Sensor (resolution)	Lens	In/out alarms	Cameras	Sensor (resolution)	Lens	In/out alarms
4621.0722DMA	4 Mpx (2592 x 1520)	7 – 22 mm (motorised)	1 / 1	4622.2812EAE	5 Mpx (2592 x 1944)	2.8 – 12 mm (motorised)	1 / 1
4621.2812EAE	5 Mpx (2592 x 1944)	2.8 – 12 mm (motorised)	1 / 1	4622.2812EDT	5 Mpx (2592 x 1944)	2.8 – 12 mm (motorised)	1 / 1
4621.2812EDT	5 Mpx (2592 x 1944)	2.8 – 12 mm (motorised)	1 / 1	4622.3312EMA	5 Mpx (2592 x 1944)	3.3 – 12 mm (motorised)	1 / 1
				4622.2812FKA	8 Mpx (3840 x 2160)	2.8 – 12 mm (motorised)	1 / 1

Panoramic				PTZ			
Cameras	Sensor (resolution)	Lens	In/out alarms	Cameras	Sensor (resolution)	Lens	In/out alarms
46235.180PAN	4 x 2 Mpx (4096 x 1800)	4 x 3.2 mm	1 / 1	46235.030D	4 Mpx (2560 x 1440)	4.7 – 141 mm (motorised)	1 / 1

Fisheye				Cube			
Cameras	Sensor (resolution)	Lens	In/out alarms	Cameras	Sensor (resolution)	Lens	In/out alarms
46234.010E.67	5 Mpx (3096x2202) (2160x2160 panoramic)	1.07 mm	1 / 1	4625.028B	2 Mpx (1920 x 1080)	2.8 mm	1 / 1



**Energia Positiva.** Insieme

