

BM HP 24
GHz

**MICROWAVE
BARRIERS**



OUTDOOR DETECTION

Long distance electronic protection

Digital range

All weather conditions

RIELLO ELETTRONICA
 **AUS electronics**
ITALIAN SECURITY MANUFACTURER

Range

AVS ELECTRONICS produces electronic alarm solutions in Italy since 1974 and introduces BM series, a range of 4 microwave barriers.

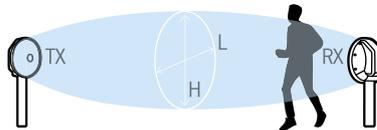


HP Digital range 24 GHz

BMHP	BM60HP	BM120HP	BM60HP	BM120 HP
	24G	24G	24G VAC	24G VAC
Maximum detection range (mt)	60	120	60	120
Supplying	13,8 Vdc		230 Vac	
Connection	Normally closed (NC) and R485 bus			

Concept

BM is composed of 2 units – **1 transmitter (TX)** and **1 receiver (RX)** - installed at a maximum distance of 60 or 120 meters. The transmitter emits continuously the microwave in direction of the receiver. The intruder who passes through the 2 units reduces consecutively the received signal, up to reach the alarm level and generate the alarm. The perimeter protection is achieved by installing multiple barriers in single thread.



Pictures of the BM HP barriers with their transversal view of the sensibility and alarm area

Benefits

HIGHER SECURITY The security area is genuinely **so wide and high** (up to 4 x 3 meters) that it is impossible to cross without generating an alarm and provides a **higher security** compared to other technologies.

LOWER FALSE ALARM RATE Setting a **pet immunity** is easy: the alarm level is programmed to ignore small animals and generate less unwanted alarms.

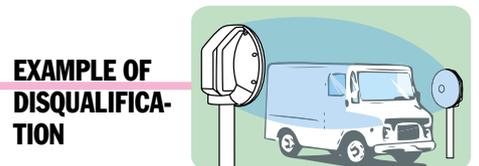
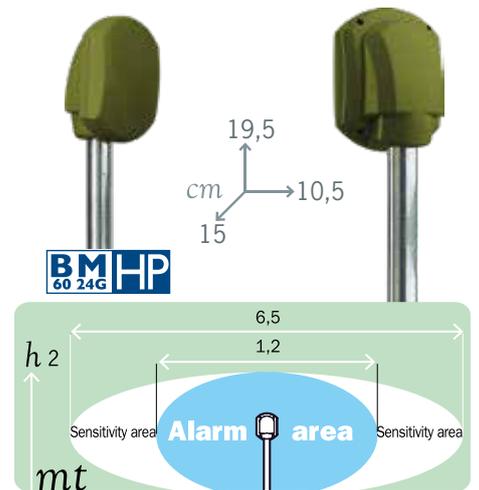
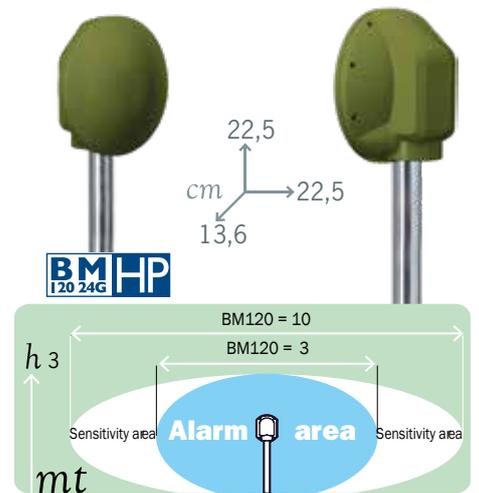
INTEGRATION CIRCUIT The **security may be increased automatically** thanks to its build-in integration circuit which amplifies the possible conditions for an alarm and triggers more easily.

DISQUALIFICATION BM distinguish a real alarm from a **disqualification** situation (like a van parked between the barriers).

COMMON INTERFACE AND INSTALLATION With the poles, BM are only 120 cm high: it is easy and quick to install them, so the cost of installation is lower compared to other technologies. It is also simple to set perfectly thanks to few trimmers and dip-switches. Finally, thanks to its regular NC outputs, BM works **with all alarm and CCTV systems**.

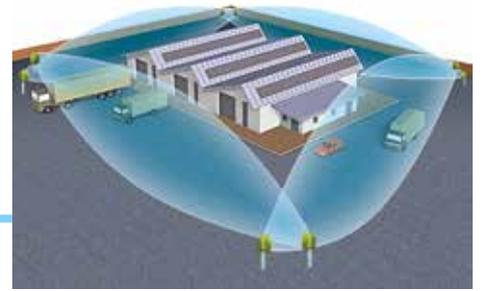
MICROWAVE PLANAR ANTENNA Since 2003, BMs integrate planar antennas which **reduce of 20% the sensibility area** compared to former parabolic antennas. Longer distances BM can be installed for the same perimeters and costs are saved. In addition, to be protected from rain, the parabolic antennas use big expansive difficult-to-handle waterproof housings when the **BM's planar antennas are highly protected** by tropicalization and installed in high resistant protective cover that avoid the condensation and its consecutive rust development.

CLIMATIC ENVIRONMENT BM operate in **all weather conditions** (snow, rain, fog) without distances reduction, unlike the active infrared barriers. If the temperature reaches less than -5 °C, it is possible to place a TERM1 heating kit. BM temperature range is -20/+55 °C.



POWER FEED BM HP are **13,8 Vdc** powered. VAC series is directly feed by the main (**220 Vac**) and include an optional backup battery to compensate an electricity absence. Main power feeding simplifies the wirings and decrease the installation cost.

MARKETS BM are **perfect for all the perimeters**: gardens, houses, borders, **warehouses**, airports, commercial resorts, car and trucks parks, **civilian, industrial, military, nuclear** and electrical plants.



Example of typical installation

Digital BM HP advantages

AUTOMATIC GAIN CONTROL (AGC) The environmental variations may improve or deteriorate the microwaves level reception over time. An Automatic Gain Control circuit automatically **optimizes the level** to maintain it flat: the settings are easier, the security is higher.

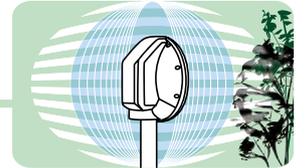
REDUCTION OF THE SENSIBILITY AREA BM HP may reduce digitally of up to 30% the area of sensibility and then ignore the movements in the **peripheral objects** (i.e. from fences or **trees**) which are the origin of unwanted alarms.

FALSE ALARM FILTER BM HP barriers records automatically up to 3600 events it is possible to classify between good and false alarms. BM HP verifies then the new events according to this database and **stop the unwanted alarms**.

DIGITAL INTERFACE Additionally to the NC outputs and other regular settings, BM HP present a USB and a **RS485 port** to be coupled to a RS485 hub or an AVS ELECTRONICS' control panel.

SOFTWARE Thanks to the local USB port or remotely by PSTN, **GSM or IP**, HPWIN software shows all the parameters, an **oscilloscope**, the 3600 last alarm events (with date and time) and proposes all the tools to set the barriers.

DIGITAL ANALYSIS ELIMINATES PERIPHERAL MOVEMENTS.



Software oscilloscope



POLES AND OPTIONALS

SB 20

Wall mounting 20 cm pole



SB 60

Wall mounting 60 cm pole



SB 120

Floor standing 120 cm pole



SB 130

Buried 130 cm pole



TERM 1

Heating kit



AMP

Vertical sensor for tamper



RS485 OPTIONAL INTERFACE

XSAT HP

RS485 HUB



HPWIN

Software for advanced settings and visualization



XTREAM and CAPTURE

RS485, IP, PSTN & GPRS control panel



Capture XTREAM

OUTSPIDER

RS 485 Pet & Trees immune outdoor sensor



TECHNICAL FEATURES	BM60HP 24G - BM60HP 24G VAC	BM120HP 24G - BM120HP 24G VAC
Maximum range	60 meters	120 meters
Nominal tension	12V	12V
Minimum tension	11,5 V	11,5 V
Maximum tension	15 V	15 V
Supplied power pack	Only BM..HP 24G VAC Input voltage: 230Vac - Current: 1 A - Power: 15 W - Out Voltage: 13.8Vdc	
Allocable battery - not supplied	Only BM..HP 24G VAC 12V - 0,8 Ah - Mod. NP 0,8 - 12	
Standby consumption	TX : 146 mA - RX : 199 mA	
Consumption during alarm	TX : 146 mA - RX : 199 mA	
Size (D x L x H)	150 x 105 x 195 Vers. VAC: 136 x 225 x 225	136 x 225 x 225
Block input	Thought dedicated "B" input	
Additional input	Negative input for detector	
Alarm output	Normally closed exchange	
Disqualification output	Normally closed output for information of disqualification	
Tamper output	Normally closed exchange	
Optional kit for anti-removal (AMP)	No	Yes
Serial output RS485	yes	
Number os selectable RS485 addresses	Max 32	
Events' memory	3600 events memorized with curve, date, time, power	
Memorization stop at disarmed system	yes	
False alarms filter	yes	
Test Point output	For control of the signal received	
Microwave working frequency	24 GHz - 24.250 GHz	
Modulation	In 5 different channels, to select via dip-switch	
Irradiated RF power	20 dBm EIRP	
Working temperature	From - 20 °C to + 55 °C For installation outdoor the use of optional heating kit (mod Term1) is suggested	
IP level	IP34	
Equipped with	Bracket for fixation on 40 mm. pole	

 **AVS electronics**
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