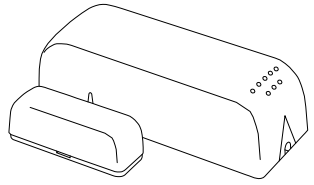


SECOLink[®]

INTRUDER ALARM SYSTEM



BK1, BK2, BF1, BK3, BV3, BK4, BT1

WIRELESS DETECTORS

INSTALLATION INSTRUCTIONS

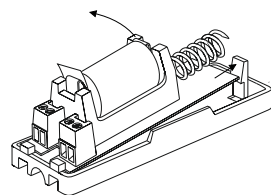
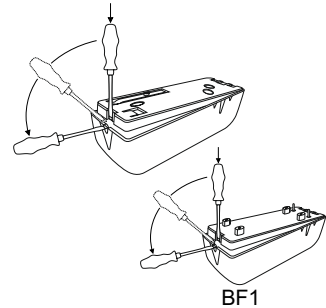
1. INFORMATION

Small size wireless detectors are designed to be used inside the premises. Wireless detectors could be equipped with a magnetic reed switch, temperature sensor and/or with up to 3 external terminals for other detectors (see the comparison table for more information). The detectors operate within the SECOLINK intruder alarm system, connecting to the receiver via the two-way, encrypted protocol. The communication range is up to 100 meters in the premises. In addition, the detectors can be used as part of a third-party security system unit thanks to the EXT11 module integration.

Table1. Wireless detector types

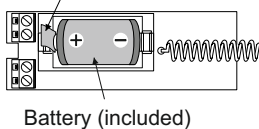
	BT1	BK1	BK2	BF1	BK3	BV3	BK4
Temperature sensor	✓						
Magnetic contact		✓					✓
External input terminals	N/A	N/A	2	N/A	3	3	3
NC type detectors			✓		✓	✓	✓
Roller type detectors			✓		✓		✓
Power terminal (up to 20 uA)			✓				
Water leakage detector				✓			

2. DETECTOR

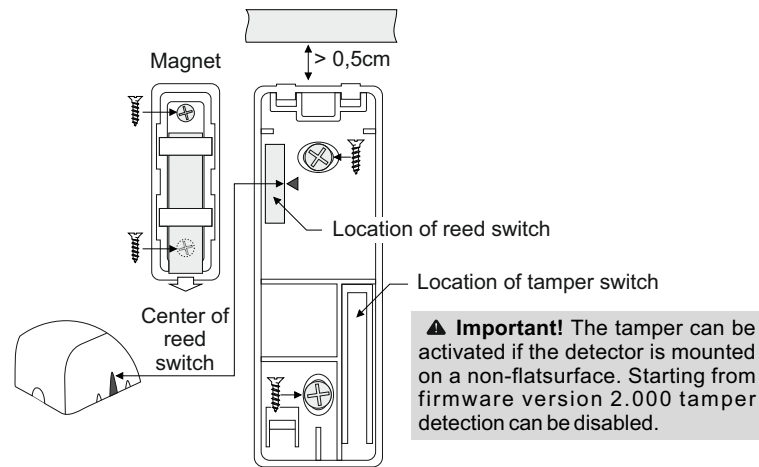


⚠ CAUTION!
Do not remove BF1 board when installing

Isolation tab. Pull the isolation tab just before enrolling the detector into the system.



Reed switch Tamper switch

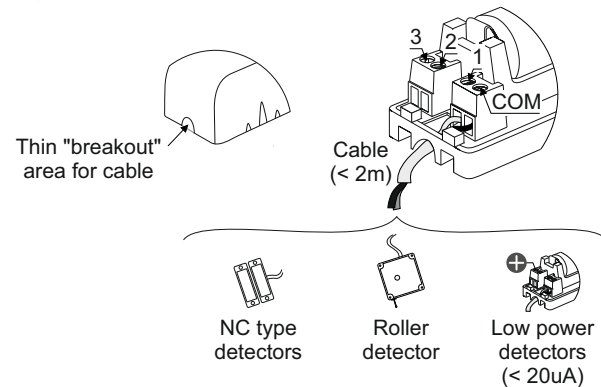


The efficiency of the magnet may vary due to the material specificity of the surface where it is mounted on (see the table below). Recommended maximum separation gap for installations on non-ferromagnetic surfaces is 25 mm and on ferromagnetic surfaces is 5 mm.

Table 2. Magnet alignment (for BK1, BK4)

Magnet	Non-ferromagnetic surfaces	Ferromagnetic surfaces
	Approach/make = 28mm Removal/break = 30mm	Approach/make = 10mm Removal/break = 12mm
	Approach/make = 28mm Removal/break = 33mm	Approach/make = 5mm Removal/break = 7mm
	Approach/make = 50mm Removal/break = 55mm	Approach/make = 34mm Removal/break = 38mm

Wiring external detectors:



3. PROGRAMMING

Enter service mode (default PIN codes: first user – **0001**, service – **0000**):

🔑 **Main menu** ▶ **Service Mode** ▶ **System Setup** ▶ **Zones**

3.1. CONFIGURING ZONE ADDRESS

- Press [7] or [*] for the next zone.
- Give an appropriate name to the zone **1**.
- Enter the correct zone address in **MA_Z** format **2**, where **MA** is a module address in the system and **Z** is a zone number in the module.
- Enable zone using loop type **Wireless** **3**.

Z01 Door	Door	1
1 Name	12_1	2
2 Address	Wireless	3
3 Loop type	...	

Default module address:

- ♦ P16-EXT116VM – **12** ♦ EXT116S – **06**
- ♦ P32-EXT116VM – **12** and **13**
- ♦ P64-EXT116VM – **12**, **13**, **14** and **15**

3.2. ENROLMENT

Wireless detectors, starting from firmware version 2.000, can be enrolled in two ways:

- ♦ by entering serial number and configuring other related settings **4**;
- ♦ by entering the **Operation code** **5**.

4	5	Z01 Door	Door	6
		1 Name	12_1	7
		2 Address	Wireless	8
		3 Loop type	2105212	
		4 Serial No.	BK1	
		Model	Magnet	
		Loop (zone)	Detect tamper	
		Yes	Battery	
		ER14250	201	
		5 Operation code	...	

🔑 **TIP!** When enrolling, the detector must be within range of the receiver. However, it's still good practice to bring the detector as close as possible to the panel during enrollment.

3.2.1 ENROLMENT USING SERIAL NUMBER

Enrolment using serial number is a two step process:

- ♦ **1step.** Enter detector serial number **6**. The keypad will identify the detector's type **7** and will show all other related settings that are required for enrolment **8**.
- ♦ **2step.** **SERVICE MODE DOES NOT HAVE TO BE ENTERED AT THIS STEP!** To complete enrolment, the detector must be activated to send a signal to the receiver. It could be done by triggering the detector's loop (zone) **OR** by pressing the tamper switch. All wireless detector zones that are still not activated, therefore not enrolled, are marked with a phrase *Not activ.* **9** in menu *Wireless communication*.

🔑 **Technical information** ▶ **Wireless communication**

Wireless communication			
...			
Detector status			
1	Entry doors	Not activ.	← 9
2	Window	LR	← 10
3	Living room	No SN.	← 11
4	Kitchen	only LR	← 12
...			

When the detector is successfully enrolled, the mode **LR** or **ES** will be displayed in the row **10**. Phrase *No SN.* will be displayed when wireless zone is enabled, but serial number of the detector is not entered **11**. Phrase *only LR* **12** will be displayed when the detector supports only the **LR** mode.

3.2.2 ENROLMENT USING OPERATION CODE

Enter wireless detector's **Operation code** **5** and press the [ENT] key. When enrolment has started, immediately press the detector's tamper switch for a short period of time (~1 sec).

Operation codes:

200	201	10
Temperature	Magnet	Water leakage detector

2	1	0	input terminal 1, 2 or 3. Zone response (speed) time of 0,4 sec.
NC type detector			
2	1	1	input terminal 1, 2 or 3.
Roller type detector			
			last digit defines the number of Roller pulses (1, 2, 3, 4, 5, 7, 9).

The same **Operation code** **5** field is used to delete the particular detector or all detectors from the particular module:

255	254
Delete single	Delete all

3.3. TEMPERATURE ZONE

Temperature field **13** is visible when the detector BT1 is enrolled as a temperature sensor **14** AND the definition *24h High temperature* or *24h Low temperature* **15** is programmed. The system will generate the *technical alarm* when the programmed temperature threshold is reached. Temperature zone violation can trigger a PGM output. Use the zone attribute *No alarm* **16** to avoid loud technical alarm (for example: to silently trigger the PGM output).

Z02 Temperature		
...		
4	Serial No.	2097151
	Model	BT1
	Loop (zone)	Temperature
	...	
5	Operation code	200
	...	
9	Definition	24h Low temp
11	Temperature	+30C
13	No alarm	Yes
	...	

Information about the present temperature is sent during polling time or when temperature changes more than 2°C. The temperature will be displayed at the bottom bar of the system's keypad screen (KM24G, KM25) or in technical information menu, as well as in the service platform ALARMSERVER.NET and in the application SECOLINK PRO (extra services required).

3.4. SECURITY GRADE, SUPERVISORY WINDOW

The wireless detector periodically sends a supervision signal to a receiver. If the system does not receive supervision (or alarm signal) signal from a specific detector, the detector is regarded as inactive. The amount of time after which a detector is considered inactive is called the *Supervisory window* **17**.

Z01 Living room
8 Supervisory window

Supervisory window and periodic supervision signal sending are directly related to selected **Security grade** **18** in the system (see Table 3).

🔑 **Main menu** ▶ **Service Mode** ▶ **System Setup** ▶ **Wireless Subsystem**

Wireless Subsystem	
¹ Security grade	Grade 1 ← 18

Table 3. Security grade

Name	Periodic supervision signal	Supervisory window	Application
Grade 1	every 1h	1h	♦ minimal risk of planned robbery.
Custom	every 1h	0 - 24h (0 = disabled)	♦ due to repetitive supervisory loss, the <i>Supervisory window</i> can be expanded from 1 to 24 hours 17 ; ♦ it is not necessary to meet requirements of Grade 1.
Grade 2	every 20 min	20 min	♦ low to medium risk of planned robbery.

⚠ Important! wireless detector supervision is postponed for 3h after changing the **Security grade** **18** from *Grade 1/Custom* to *Grade 2* or after restart of the system/module.

4. COMMUNICATION MODE SELECTION

Wireless devices, starting from version 2.000 support new communication mode, that can be selected in menu **Mode** **19**:

🔑 **Service mode** ▶ **System setup** ▶ **Wireless Subsystem**

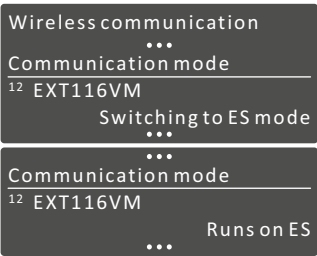
Wireless settings	
2 Mode	ES (Energy Save) ← 19

Table 4. Mode comparison

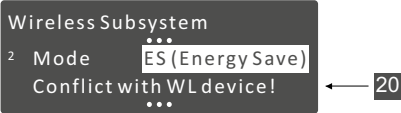
Mode	Distance	Battery life	Application
LR	●●●●●	●●●○○	- harsh environment for a signal to travel (ex. concrete walls and ceilings); - long range; - less than 32 wireless devices in the system.
ES	●●●●○○	●●●●●	- suitable environment for a radio signal to travel (ex. wooden walls); - middle range; - more than 32 wireless devices in the system;

The newly set communication mode will be applied in the system when all enrolled wireless devices will communicate with a receiver. The actual system status is displayed at the menu *Wireless communication*:

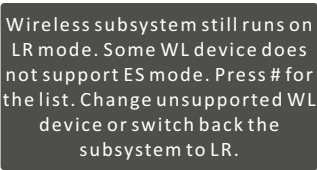
🔍 ② ▶ *Technical information* ▶ *Wireless communication*



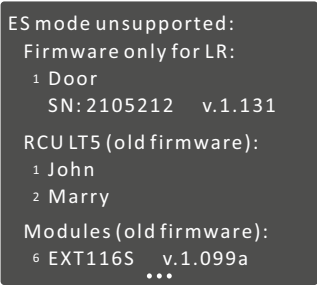
The conflict can occur 20 when the mode *ES* 19 is chosen in the system with the older wireless devices. The new setting will not be applicable and an error will be displayed on screen upon changing the mode:



on main screen:



after pressing key [#]:

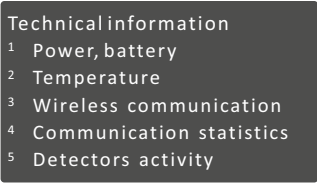


The error message that *ES* is not supported is also displayed in the corresponding user (LT5), wireless zone or module editing menu. All errors will be displayed until all older wireless devices will be replaced (upgraded) OR when *Mode* 19 will be changed back to the *LR*.

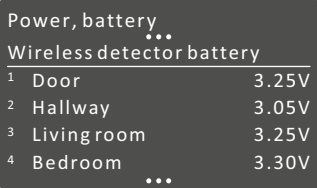
5. TECHNICAL INFORMATION

To evaluate wireless detector work get into technical information menu:

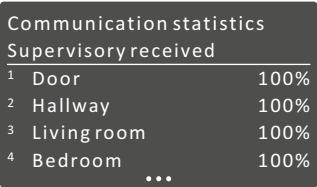
🔍 ② ▶ *Technical information*



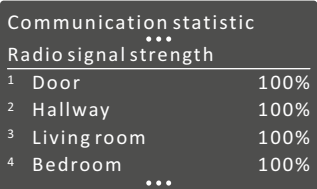
Battery life of wireless detectors depends on the environment, usage, and the specific wireless devices being used. Factors such as humidity, high or especially low temperatures, large variations in temperature may all reduce the actual battery life in a given installation. When the battery is nearly dead (low battery threshold voltage < 2,35V ± 5% 21), the detector will send a low battery signal to the alarm system for the user to replace it before it discharges completely.



Supervisory 22 is expressed in percentages, measured while system is armed in *AWAY* or *MAXAWAY* modes. This value indicates how well the detector and receiver communicates. Take the necessary actions to improve the signal quality if the supervisory value is not in an acceptable range! Even a simple action, like changing the location of the detector might significantly improve the reception quality.



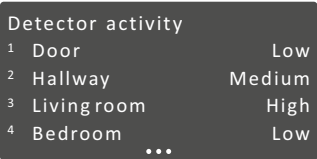
Radio signal strength 23 in a wireless environment indicates how well the control panel or module can „hear“ a signal from the detector. The information how the detector “hears” the panel/module in the wireless network can be found in ALARMSERVER.net (column *RSSI_wl* 24).



Detector activity is expressed in words 25, showing the average number of all the signals received (excluding the supervision signal) from a single detector per day during a 1 week period of time.

- Low – from 0 to 12 violations;
- Medium – from 12 to 24 violations;
- High – 24 to 30 violations;
- Very high – from 30 and more.

Higher activity decreases the estimated battery life time.

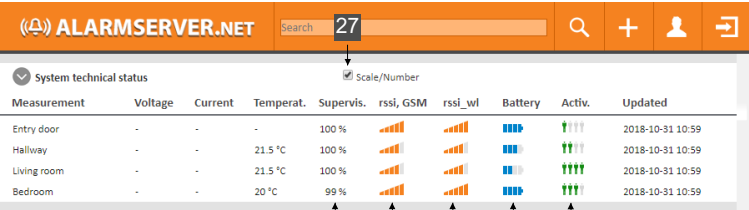


To keep the system well maintained it is recommended for installers to use ALARMSERVER.NET online services. To see the extended technical information, the system should be added to the installer’s account and should be programmed to periodically send the technical information to the server 26 .

🔍 *Main menu* ▶ *Settings* ▶ *www.alarmserver.net* ▶ *Reporting* ▶ *Technical information*



Remove checkbox 27 to see specific parameter values.

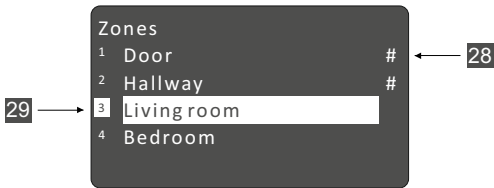


6. TEST

Enter test mode menu:

🔍 *Main menu* ▶ *Test* ▶ *Burglary zone test*

When a signal from the detector is received the zone is marked with # 28 .The detector will instantly go to sleep mode for ~ 10 seconds after successfully transmitting the signal.To end testing press [ENT].

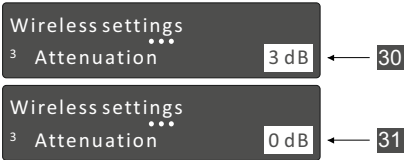


Keypad KM24G or KM25 has a feature that allows you to choose one or more zones that need to be tested 29 . To select the zone(s) use the keypad key [#]

7. IMMUNITY TO ATTENUATION

Due to the fact that there may be changes in the passiveenvironment after installation, it is possible to *temporarily* attenuate 30 the radio frequency connection by 3dB during installation or maintenance. If the system continues receiving signal from the detector with an attenuated radio frequency link, then it will for sure work under normal conditions.

🔍 *Service mode* ▶ *System setup* ▶ *Wireless settings*



⚠ **DO NOT FORGET** to change the *Attenuation* setting's value to *0dB* when installation or maintenance works are finished 31 .

8. SUMMARY

Compatibility	- EXT116VM (panels P16, P32, P64), - EXT116S (system module), - EXT11 (receiver for 3rd party systems)
Communication	Dual way, encrypted
Type	Wireless
Uses	Indoor
Tamper switch	Yes (enabled by default)
Operating frequency	868,30 or 915,30 MHz depending on the country of distribution
Periodic supervision signal	20 min or 1h
Supervisory window	1h (<i>Grade 1</i>), 20min (<i>Grade 2</i>), 0-24h (<i>Custom</i>)
Communication range in building	up to 100 m
Power supply	½ AA Lithium battery (ER14250)
Power supply voltage	3,6 V
Battery life time ¹	- BK1, BT1: ~3 years - BK2, BF1, BK3, BK4: ~2 years
Operating humidity	up to 70%
Operating temperature	from -10 up to +55°C
Overall dimensions	27 x 23,6 x 75 mm

¹ – calculated battery life expecting that there will be 12 events and 12 restores and mode *LR* is chosen.

SYSTEM COMPLIANCE & WARRANTY

Kodinis Raktas UAB, manufacturer of SECOLINK Intruder Alarm System, offers a Warranty for a term of twenty-four months. It declares, that product complies with essential EU directives and EU standards EN 50131-1, Grade 1, Environmental Class II; EN 50131-2-2. For more information visit manufacturer's website www.kodinis.lt or www.secolink.eu for a complete text of declaration. SECOLINK Intruder Alarm System is designed and manufactured in Lithuania.

The warranty is given in favor of the purchaser (hereunder the "Purchaser") purchasing the products directly from Kodinis Raktas UAB (hereunder the "Kodinis Raktas") or from its authorized distributor. During the warranty period, manufacturer shall, at its option, repair or replace any defective product upon return of the product to its factory, at no charge for labor and materials. Repaired products shall be warranted for the remainder of the original warranty period. The Purchaser assumes all responsibility for the proper selection, installation, operation and maintenance of any products purchased from Kodinis Raktas or from its authorized distributor. To obtain service under this warranty, please return the item(s) in question to the point of purchase. All authorized distributors and dealers have a warranty program. All transportation costs and in-transit risk of loss or damage related, directly or indirectly, to products returned to Kodinis Raktas for repair or replacement shall be borne solely by the Purchaser. Kodinis Raktas

warranty under this warranty does not cover products that is defective (or shall become defective) due to: (a) alteration of the products (or any part thereof) by anyone other than Kodinis Raktas; (b) accident, abuse, negligence, or improper maintenance; (c) failure caused by a product which Kodinis Raktas did not provide; (d) failure caused by software or hardware which Kodinis Raktas did not provide; (e) use or storage other than in accordance with Kodinis Raktas specified operating and storage instructions; (f) to consumable parts, such as batteries or coatings that are designed to diminish over time. There are no warranties, expressed or implied, of merchantability or fitness of the products for a particular purpose or otherwise, which extend beyond the description on the face hereof. This limited warranty is the Purchaser's sole and exclusive remedy against Kodinis Raktas and Kodinis Raktas sole and exclusive liability toward the Purchaser in connection with the products, including without limitation – for defects or malfunctions of the products. This warranty replaces all other warranties and liabilities, whether oral, written, (non-mandatory) statutory, contractual, in tort or otherwise. In no case shall Kodinis Raktas be liable to anyone for any consequential or incidental damages (inclusive of loss of profit, and whether occasioned by negligence of the Kodinis Raktas or any third party on its behalf) for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever. Kodinis Raktas does not represent that these products can not be compromised or circumvented; that these products will prevent any person injury or property loss or damage by burglary, robbery, fire or otherwise; or that these products will in all cases provide adequate warning or protection. Purchaser understands that a properly installed and maintained product may in some cases reduce the risk of burglary, fire, robbery or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss or damage as a result. Consequently, Kodinis Raktas shall have no liability for any personal injury; property damage or any other loss based on claim that these products failed to give any warning. If Kodinis Raktas is held liable, whether directly or indirectly, for any loss or damage with regards to these products, regardless of cause or origin, Kodinis Raktas maximum liability shall not in any case exceed the purchase price of these products, which shall be the complete and exclusive remedy against Kodinis Raktas.

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