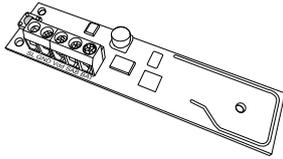# SECOLink®

INTRUDER ALARM SYSTEM

BS100
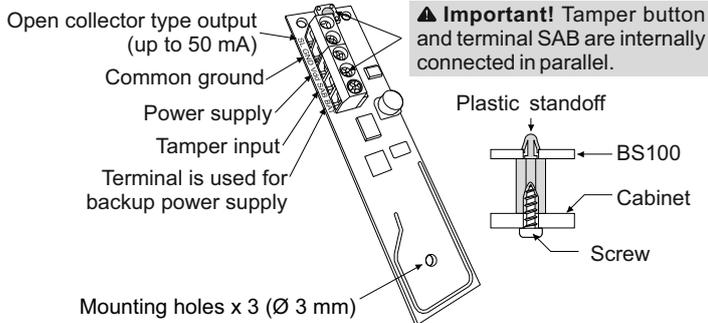
WIRELESS PGM OUTPUT

INSTALATION INSTRUCTION
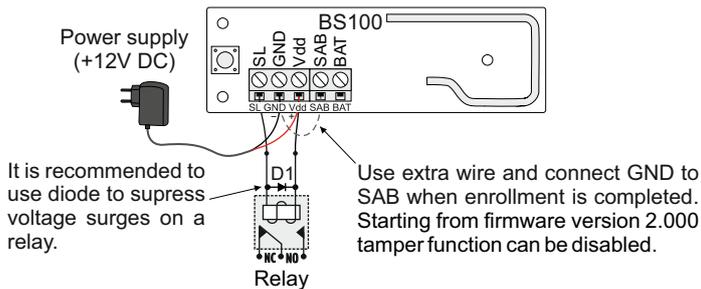
1. INFORMATION

BS100 – wireless PGM output with an open collector type output intended to trigger a siren or relay, control gates and etc.

Wireless output operates within the SECOLINK intruder alarm system, by connecting via the two-way, encrypted protocol to the receiver. The communication range is up to 100 meters in the premisses. In addition, the wireless PGM output can be used as part of third-party security system unit due to the EXT11 module integration.
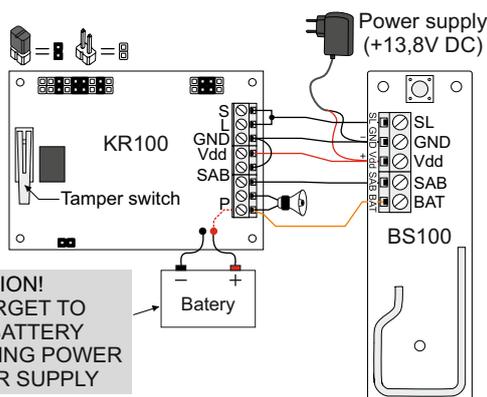
2. PGM OUTPUT

⚠ Important! Tamper button and terminal SAB are internally connected in parallel.

Open collector type output (up to 50 mA)
Common ground
Power supply
Tamper input
Terminal is used for backup power supply
Plastic standoff
BS100
Cabinet
Screw
Mounting holes x 3 (Ø 3 mm)

3. APPLICATIONS

Connecting a relay:

Power supply (+12V DC)

BS100

It is recommended to use diode to supress voltage surges on a relay.

Use extra wire and connect GND to SAB when enrollment is completed. Starting from firmware version 2.000 tamper function can be disabled.

D1
Relay

Connecting a siren KR100:

Power supply must be suitable for the siren (+13,8V DC). All jumpers should be put in positions that allows to trigger the siren by applying ground ("minus").
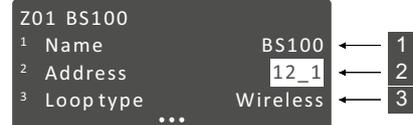

Power supply (+13,8V DC)

KR100
Tamper switch
S
L
GND
Vdd
SAB
P

BS100
SL
GND
Vdd
SAB
BAT

Batery

⚠ CAUTION!
DO NOT FORGET TO CONNECT BATTERY BEFORE APPLYING POWER FROM POWER SUPPLY

4. PROGRAMMING

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

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

4.1. SETTING UP ADDRESS OF THE ZONE

1. Press [7] or [★] for a next zone.
2. Give an appropriate name to the zone **1**.
3. 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.
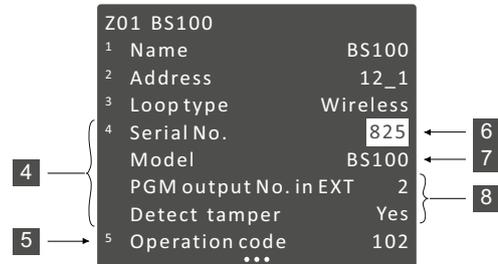4. Enable zone using loop type *Wireless* **3**

```
Z01 BS100
¹ Name              BS100    ← 1
² Address           12_1     ← 2
³ Loop type      Wireless    ← 3
         •••
```

Default module address:

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

4.2. ENROLMENT

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

- ◆ by entering serial number and setting up other related settings **4**;
- ◆ by entering the *Operation code* **5**.

```
Z01 BS100
¹ Name              BS100
² Address           12_1
³ Loop type      Wireless
⁴ Serial No.         825     ← 6
  Model             BS100    ← 7
  PGM output No. in EXT  2    } 8
  Detect tamper       Yes
⁵ Operation code     102
         •••
```

♀ TIP! When enrolling, the BS100 must be within range of the receiver. However, it's still good practice to bring the BS100 as close to the panel as possible during enrollment.

4.2.1 ENROLMENT USING SERIAL NUMBER

Enrolment using serial number is a two step process:

◇ **1 step.** Enter BS100 serial number **6**. The keypad will identify the device type **7** and will show all other related settings that are required for enrolment **8**.

◇ **2 step.** SERVICE MODE DOES NOT HAVE TO BE ENTERED AT THIS STEP! To complete enrolment, the BS100 must be activated to send a signal to the receiver. It could be done by pressing the tamper button.

When wireless device is not enrolled all its zones are marked with a phrase *Not activ.* **9** in menu *Wireless communication.*

🖉 ⑦ ▶ *Technical information ▶ Wireless communication*

```
Wireless communication
         •••
Detector status
¹ BS100           Not activ.  ← 9
² Window                LR     ← 10
³ Living room         No SN.   ← 11
⁴ Kitchen            only LR   ← 12
         •••
```
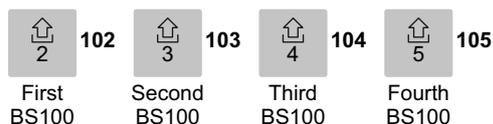
When the device is successfully enrolled, the mode *LR* or *ES* will be displayed next to its all zones **10** . Phrase *No SN.* will be displayed when wireless zone is enabled, but serial number of the device is not entered **11** . Phrase *only LR* **12** will be displayed when the device supports only the *LR* mode.

4.2.2 ENROLMENT USING OPERATION CODE

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

Operation codes:

⬆2 **102**	⬆3 **103**	⬆4 **104**	⬆5 **105**
First BS100	Second BS100	Third BS100	Fourth BS100

The same *Operation code* 5 field is used to delete the particular BS100 or all BS100 from the particular module (module supports 4 x BS100):

 255

Delete single

 254

Delete all

4.3. SUPERVISORY WINDOW

The wireless device periodically sends a supervision signal to a receiver. If the system does not receive supervision (or alarm signal) signal from a specific device, the device is regarded as inactive. The amount of time after which a device is considered inactive is called the *Supervisory window* 13 .

```
Z01 BS100
     •••
7  Supervisory window    1h  ← 13
     •••
```

Supervisory window and periodic supervision signal sending are directly related to selected security grade 14 in the system (see Table 1).

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

```
Wireless Subsystem
     •••
1  Security grade    Grade 1  ← 14
     •••
```

Table 1. Security grade

Name	Periodic supervision signal	Supervisory window
Grade 1	every 1h	1h
Custom	every 1h	0 - 24h (0 = disabled)
Grade 2	every 20 min	20 min

5. COMMUNICATION MODE SELECTION

Wireless devices, starting from version 2.000 support new communication mode, that can be selected in menu *Mode* 15 :

🔧 *Service mode ▶ System setup ▶ Wireless Subsystem*

```
Wireless settings
     •••
2  Mode    ES (Energy Save)  ← 15
     •••
```

Table 2. 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 wl. devices in the system;

The conflict can occur when the mode *ES* 15 is chosen in the system with the older wireless devices that supports only the *LR* mode. The new setting will not be applicable and an error will be displayed on screen upon changing the mode, on main screen, 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* 15 will be changed back to the *LR* .

6. SETTING UP ADDRESS OF THE PGM OUTPUT

🔧 *Service mode ▶ System Setup ▶ PGM outputs*

1. Press [7] or [★] for a next PGM output.
2. Give an appropriate name to an output 16 .
3. Enable PGM output by changing the *Definition* 17 from *Not Used* to any other depending on a specific of use.
4. Enter a wireless PGM output address in *MA_P* format 18 , where *MA* specifies a EXT116S or EXT116VM address in the system (where BS100 is enrolled) and *P* specifies the number which was entered in a field *PGM output No. in EXT* 8 OR it is the LAST digit of the *Operation code* which was used for enrolling 5 (see the wireless PGM addressing examples in Table 3).

```
O04 BS100
1  Name              BS100  ← 16
2  Address            06_2  ← 18
3  Definition   Burglary alarm  ← 17
     •••
```

5. All other PGM output settings are programmed like usual.

Table 3. Examples of PGM address

Zone address (BS100)	PGM output No. in EXT	Operation code	PGM address that needs to be entered...
06_1	2	1 0 2	06_2
06_8	3	1 0 3	06_3
12_5	4	1 0 4	12_4
13_1	5	1 0 5	13_5

<table>
<tr><td colspan="2" align="center">6. SUMMARY</td></tr>
<tr><td>Compatibility</td><td>◇EXT116VM (panels P16, P32, P64),
◇EXT116S (system module),
◇EXT11 (receiver for 3rd party systems)</td></tr>
<tr><td>Communication</td><td>Dual way, encrypted</td></tr>
<tr><td>Type</td><td>Wireless</td></tr>
<tr><td>Uses</td><td>Indoor</td></tr>
<tr><td>Output type</td><td>Open collector type (makes „minus")</td></tr>
<tr><td>Maximum load</td><td>50 mA / 12V DC</td></tr>
<tr><td>Tamper input</td><td>Yes (enabled by default)</td></tr>
<tr><td>Operating frequency</td><td>868,30 or 915,30 MHz depending on the country of distribution</td></tr>
<tr><td>Periodic supervision signal</td><td>20 min or 1h</td></tr>
<tr><td>Supervisory window</td><td>◇1h (*Grade 1*),
◇20min (*Grade 2*),
◇0 - 24h (*Custom*)</td></tr>
<tr><td>Communication range in building</td><td>up to 100 m</td></tr>
<tr><td>Power supply (Vdd)</td><td>+12V DC ± 15% (msg.: "low voltage" < 10V)</td></tr>
<tr><td>Current consumption (without load)</td><td>◇standby: ~13mA,
◇communication: ~25mA</td></tr>
<tr><td>Operating humidity</td><td>up to 70%</td></tr>
<tr><td>Operating temperature</td><td>from -10 up to +55°C</td></tr>
<tr><td>Overall dimensions</td><td>92 x 22 x 18 mm</td></tr>
</table>

SYSTEM COMPLIANCE & WARRANTY

CONTACT US

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