SAK-25
Instruction Manual

Compatibility: The SAK-25 Wire to RF Transmitter, with Magnetic Contact Sensor, is compatible with a variety of Rosslare's receivers and panels, in 433.92 or 868.35 MHz.

GENERAL DESCRIPTION

The SAK-25 Universal WIRE to RF Transmitter is a unique RF transmitter, with advanced features that operates at 433.92 or 868.35 MHz designed for wireless security and control applications.

Totally Universal: Convert Wired Sensors to Wireless, and interface them to the RF Panel or Multi-Channel Receiver. Compatible with wired PIR / Door / Window / Smoke / Rolling Shutter / Vibration sensors / Glass Break Detectors and more.

Main features are: Two programmable wired inputs and One local Magnetic Contact Sensor, which may share a Supervised RF Sensor ID Code, or have three separate Supervised ID Codes (Supervisor will transmit every 20 minutes, or 1 hour, depending on model ordered). The SAK-25 operates on a 3.6V / 900mAh lithium battery with low current draw, one battery lasts for min 2 Years (With 200 Transmissions per day). In case of low Batt, SAK-25 will transmit a Low Battery Signal to the control Unit. For Backup Power, an auxiliary power input can be connected at +12V DC and GND from the host panel of the wired sensor, or an AC/DC Adaptor.

ADVANCED FEATURES

* Programmable Locally or by PC Software Utility (RS232)
* Ultra Low Power Microprocessor Design with Real-Time Software
* Tamper-Proof Internal Antenna
* Supervised (Every 20 minutes), with Low Battery detection and reporting to Rosslare's RF Control Units
* Cover and Wall (Selectable) - Double Tamper Detection
* Pulse counting Wired Input for Rolling Shutter, Shock Detection facility programmable to 3,6, or 9 pulses
* 3 Channels (2 Wired, 1 Local Mag Contact) programmable as three independent zone ID's or as a single zone ID's.
* Programmable Enable Disable of Local Magnetic Contact Sensor.

PROGRAMMING

Programming of the SAK-25 can be performed locally using the LED and the buttons S1 and S2, as well as, from a connected PC. You may connect to the SAK-25 from the PC using the MD-14 RS232 to RS485 converter and Rosslare's SAK-25 Utility Software for the PC. (Available from Rosslare Website),

SOLID RED LED MENU for programming the operation of Inputs 1 and 2

Local Programming the operation of the SAK-25 is available locally using the push buttons S1 and S2 and the Tri Color LED.
1) Press both buttons at the same time and release when the LED is solid red to enter the menu   🔴 **Solid Red LED MENU**
2) Press S1 to scroll Input 1 programming modes-Release at desired Mode.
3) Press S2 to scroll Input 2 programming modes-Release at desired Mode.
4) Press both S1 and S2 together to exit the menu.

Input 1
(Wired Input) Programmable Locally and by PC Link Software, as any of the options below.

Local Programming Menu - S1

Mode		LED
Mode 1: PIR (Normally Open)	🔴	Solid Red LED
Mode 2: PIR (Normally Closed)	🔴	Flashing Red LED
Mode 3: Door/Window (Normally Open)	🟠	Solid Orange LED
Mode 4: Door/ Window (Normally Closed)	🟠	Flashing Orange LED
Mode 5: Smoke (Normally Open)	🟢	Solid Green LED
Mode 6: Smoke (Normally Closed)	🟢	Flashing Green LED

Input 2
(Wired Input) Programmable Locally and by PC Link Software, as any of the options below.

Local Programming Menu - S2

Mode		LED
Mode 1: PIR (Normally Open)	🔴	Solid Red LED
Mode 2: PIR (Normally Closed)	🔴	Flashing Red LED
Mode 3: Door/Window (Normally Open)	🟠	Solid Orange LED
Mode 4: Rolling Shutter 3 Pulse Count	🟠	Flashing Orange LED
Mode 5: Rolling Shutter 6 Pulse Count	🟢	Solid Green LED
Mode 6: Rolling Shutter 9 Pulse Count	🟢	Flashing Green LED

Model : SAK-25

Inside Model : SAK-25

PC-Link Connector RS-232 I/O connects to PC via supplied data cable.
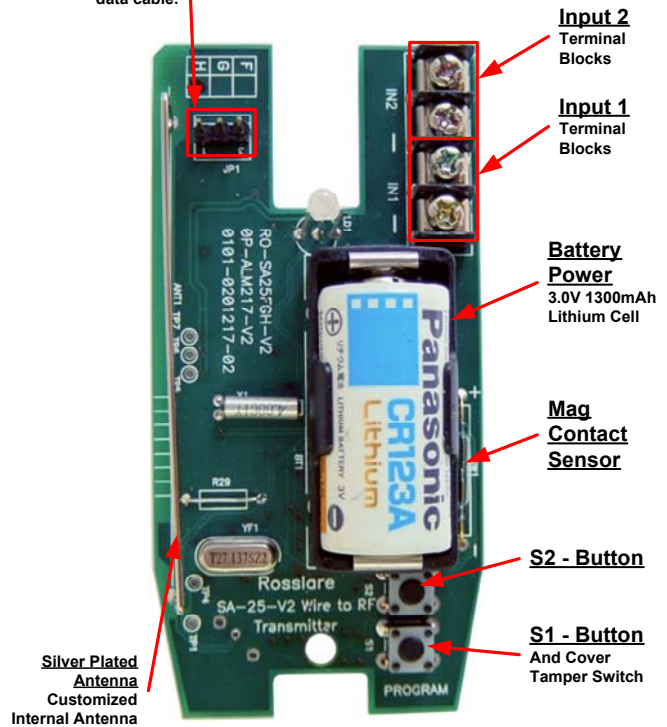
Input 2 Terminal Blocks

Input 1 Terminal Blocks

Battery Power 3.0V 1300mAh Lithium Cell

Mag Contact Sensor

S2 - Button

S1 - Button And Cover Tamper Switch

Silver Plated Antenna Customized Internal Antenna

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LOCAL PROGRAMMING (cont.)

SOLID ORANGE MENU for Programming Channels Common ID and Independent ID Codes

Local Programming the operation of the SAK-25 is available locally using the push buttons S1 and S2 and the Tri Color LED.
1) Press both buttons at the same time and release when the LED is solid orange to enter the menu
2) You will see the current mode of the ID Code settings upon release of both of the buttons.

Solid Orange LED MENU
S1   S2

   Mode 1: All channels report independent ID
   Mode 2: All channels report same ID

Flashing Red LED
Solid Red LED

3) Press S2 to toggle the current setting.

Same ID Code for all 3 Inputs
If the mode was independent ID's (Flashing Red),
pressing S2 will toggle the mode to same ID Codes for three Channels.

Flashing Red LED   S2
Solid Red LED

Press both S1 and S2 together to exit the menu.

Different ID Codes for all 3 Inputs
If the mode was Same ID's (Solid Red),
pressing S2 will toggle the mode to independent ID Codes for three Channels.

Solid Red LED   S2
Flashing Red LED

Press both S1 and S2 together to exit the menu.
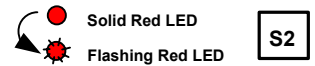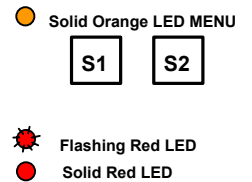
FLASHING ORANGE MENU for Programming Channel 3 Local Magnetic Sensor Restore Event Operation

Local Programming the operation of the SAK-25 is available locally using the push buttons S1 and S2 and the Tri Color LED.

Flashing Orange LED MENU
S1   S2

1) Press both buttons at the same time and release when the LED is solid orange to enter the menu.
2) You will see the current mode of the ID Code settings upon release of both of the buttons.

Mode 1: Built-in Magnetic Sensor will not automatically send restore, only when the magnet will be effectively restored.
Important Note: This local menu will only allow programming if Input 1 is programmed as Magnetic Door/ sensor & Normally Open

Flashing Red LED

Mode 2: Built-in magnetic sensor will automatically send the restore signal after two seconds, even if the magnet has not been effectively restored.
Important Note: This local menu will only allow programming if Input 2 is programmed as 3,6 or 9 pulses rolling shutter or vibration pulse counting.
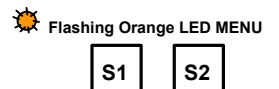
Solid Red LED

3) Press S2 to toggle the current setting

Toggling Mode 1 to Mode 2
If the mode was Mode 1 (Flashing Red) pressing S2 will toggle the mode to Mode 2.

Flashing Red LED   S2
Solid Red LED

Toggling Mode 2 to Mode 1
If the mode was Mode 2 (Flashing Red) pressing S2 will toggle the mode to Mode 1.

Solid Red LED   S2
Flashing Red LED

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SOLID Green MENU for Enabling or Disabling the Internal Built in Magnetic Contact Sensor

Local Programming the operation of the SAK-25 is available locally using the push buttons S1 and S2 and the Tri Color LED.
1) Press both buttons at the same time and release when the LED is solid orange to enter the menu
2) You will see the current mode of the ID Code settings upon release of both of the buttons.

⬤ Solid Orange LED MENU

[S1] [S2]

    Mode 1: Built-in Magnetic Sensor Enabled
    Mode 2: Built-in Magnetic Sensor Disabled

Flashing Red LED

Solid Red LED

3) Press S2 to toggle the current setting

Toggling from Mode 1 to Mode 2
If the mode was Mode 1 (Flashing Red) pressing S2 will toggle the mode to Mode 2.

Press both S1 and S2 together to exit the menu.

Flashing Red LED   [S2]

Solid Red LED

Toggling from Mode 2 to Mode 1
If the mode was Mode 1 (Flashing Red) pressing S2 will toggle the mode to Mode 2.

Press both S1 and S2 together to exit the menu.

Solid Red LED   [S2]

Flashing Red LED

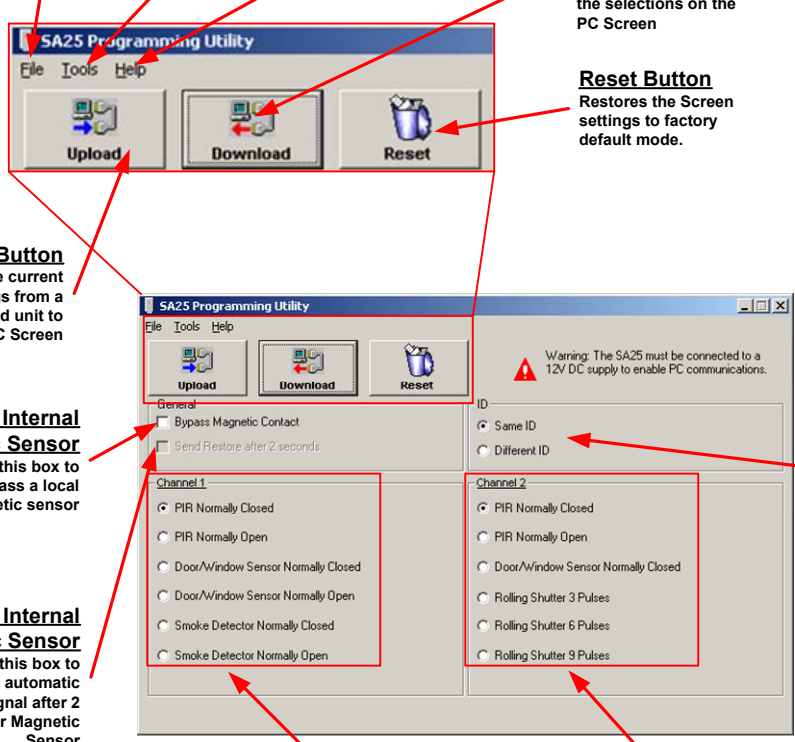## Programming SAK-25 Using PC Software Utility (Version 1.2.0)

You can download the PC Software utility from Rosslare's Software Download Site on the world wide web. For an updated password to the site, please contact your authorized Rosslare Representative.

1) Download the software or install it from the CD-Rom by following the instructions.

2) Connect one side of the Rosslare RS-232 Data cable to the COM port of the PC.

3) Plug the other end, a 3-Pin connector, of the RS-232 Cable to the SAK-25 product, according to the connector polarity.

4) Start the utility software on the PC. The following screen with appear.

5) Provide power to the SAK-25 unit.

6) Make your programming selections and Upload or Download. You have **ONLY 20 seconds** to make a selection before the SAK-25 unit switches to regular operation mode and cannot be programmed.

Default 3-ID's Independent
Magnet not functioning
Channel 1 (PIR Normally Open)

File Menu
Upload
Download
Reset
Exit

Tools Menu
Options
Language

Help Menu
Help and
Instructions

Download Button
Programs a connected unit with the selections on the PC Screen

Reset Button
Restores the Screen settings to factory default mode.

Upload Button
Retrieves the current settings from a connected unit to the PC Screen

Bypass Internal Magnetic Sensor
Check this box to Bypass a local magnetic sensor

Restore Internal Magnetic Sensor
Check this box to activate automatic restore signal after 2 seconds for Magnetic Sensor

Select for 3 Channels same ID Code or Separate ID Codes for RF

Input 1 Programming

Input 2 Programming

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PC-LINK PROGRAMMING:

The SAK-25 can be easily programmed visually on the PC Screen and then Downloaded to the Unit by connecting to the PC RS232 COM Port, and running the SAK-25 PC Utility software for Windows.

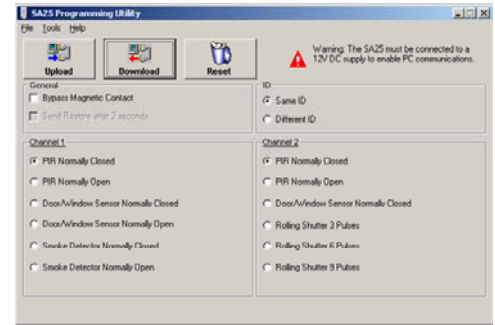SAK-25 PC Utility software is designed to be installed and run on:

Microsoft's Windows 95/98/ME and NT/ 2000/ XP Operating Systems

SAK-25   **PC or Laptop**   **SAK-25 PC Programming Utility**

WIRING DIAGRAM:

Power is supplied to the SAK-25 by a Lithium primary battery.

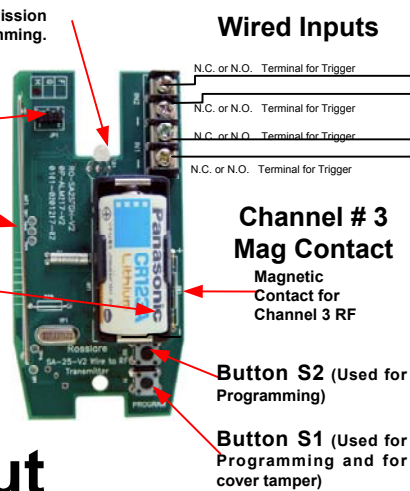Two channels are available on the SAK-25 for connection to wired sensor units.

LED Indicates Transmission and is also used for Programming.

RS-232 Communications Port, use Rosslare's RS-232 Data Cable to connect to the 3-pin male connector on SA-25 for communication to PC Upload/ Download Software for programming.

Built-in Tuned internal antenna.

Battery Powered 1300mAh Lithium battery.

Wired Inputs

N.C. or N.O. Terminal for Trigger
N.C. or N.O. Terminal for Trigger
N.C. or N.O. Terminal for Trigger
N.C. or N.O. Terminal for Trigger

Channel # 3 Mag Contact
Magnetic Contact for Channel 3 RF

Button S2 (Used for Programming)

Button S1 (Used for Programming and for cover tamper)

RF Output

Sensor for Channel # 2
Connects to output of a wired sensor or external device.

PIR / Door / Window / Smoke / Rolling Shutter / Glass Break Detector/

Wired Input 2

Ground from Host Wired Panel
+12Volt DC input from Host Wired Panel
N.C. or N.O. Terminal for Trigger
N.C. or N.O. Terminal for Trigger

Sensor for Channel # 1
Connects to output of a wired sensor or external device.

PIR / Door / Window / Smoke /

Wired Input 1

Ground from Host Wired Panel
+12Volt DC input from Host Wired Panel
N.C. or N.O. Terminal for Trigger
N.C. or N.O. Terminal for Trigger

SPECIFICATIONS

Primary Power Supply :	3-volt Lithium 1300 mAH, Model CR123A **CAUTION!** *Dispose of Properly, do not re-charge, disassemble, heat or incinerate.*
Channel 1:	Wired Input has two terminal blocks CH1 is programmable normally open (N.O), normally closed (N.C.), or End Of Line Resistor
Channel 2:	Wired Input has two terminal blocks CH2 is programmable normally open (N.O) or normally closed (N.C.)
Channel 3:	Built-in magnetic contact sensor - Normally Closed. Can be disabled when not in use.
Programming:	The SAK-25 Can be programmed locally using the buttons and the LED, as well as by using the PC Utility Software.
Rolling Shutter Contact:	Programmable to Channel 2 only. Selectable pulse count for High, Medium and Low sensitivity, 3 or 6 or 9 pulses to activate.
Operating Temperature:	0°C to +60°C
Operating Humidity:	Up to 95% Non-Condensing (max.)
Case Tamper Switch:	Removal of SAK-25 Front Cover (Protected by cover tamper switch)
Back Tamper Switch:	Removal of SAK-25 from the wall mount (protected by Back tamper switch)
Supervisor:	The supervisory signal is routinely transmitted to the panels every 20 minutes, advising the Tamper Status, Battery Status, Event Activation Status
Current Consumption:	Standby - 17 uA Transmit - 14 mA
Size:	98mm x 50mm x 29mm
Weight:	46 grams (3.2 oz)

CE 0678 $\textcircled{!}$

TÜV CERT
DIN EN ISO 9001
Certificate: 09 100 6925