

Foot Switch Wireless Panic Alarm System

Model: FBXFS01

Technical Product Specification Document



The Wireless Foot Switch Panic Alarm System is a next-generation, concealed emergency trigger designed for high-risk environments where discretion is paramount. This under-desk device enables staff in banks, jewelry stores, cash counters, reception desks, and pharmacies to silently alert security personnel without drawing attention from potential threats.

The system operates on a 100% wireless RF platform, requiring no complex wiring. It features a heavy-duty metal foot pedal that is activated by deliberate foot pressure, ensuring hands-free operation and minimizing false alarms. Upon activation, the system instantly notifies security through a choice of silent or audible alerts, providing a critical layer of safety during robberies or aggressive encounters.

Components included in the set

The model **FBXFS01** system includes the following core components:

- **1 x Foot Switch with inbuilt wireless RF Transmitter** (equipped with an A23 battery)
- **1 x Receiver Alarm Siren Unit** (with 108 decibel loud sound)
- **1 x Wireless RF Remote Controller (optional) to Trigger the Alarm** (with an A23 battery)
- **1 x Power Adapter** (110-240V AC to 12V DC)

Technical Data

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Wireless Foot Switch Alarm System, FBXFS01 : Technical Product Document

Product designed and manufactured by **FORBIX SEMICON®**

Foot Switch Wireless Transmitter

Model: FBXFS01



Precautions and mounting locations:

The foot switch button can be secured (or simply kept) on a floor or any flat surface

For indoor purpose use only

Keep away from metallic enclosures

Do not connect the (internal) battery in opposite direction

Range of communication:

30-40 meters indoors (depending on environmental condition)

60-80 meters outdoors (in open line of sight)

Pressing the foot button for at least 2-3 seconds improves the range of communication

Mechanical:

Body material: Light weight aluminum die cast.

Dust proof and flame retardant

Size: 200 x 100 x 125 mm

Weight: 450 gms

Environmental Requirement:

Operating Temperature: 0°C to 40°C

Storage Temperature: 5°C to 25°C

Relative Humidity: 5% (0°C) ~ 95% (40°C) RH

Features:

Foot switch button with concealed wireless transmitter inside. Pressing the pedal triggers SOS signal. A receiver at a distant location listens to this wireless RF signal and takes action. The receiver action can be either in the form of loud / mid-volume alarm siren, quiet beeper, a display unit etc.

Mechanical endurance and 1,000,000 times electrical durability. Dust proof and flame retardant.

Technical details:

Internal Wireless Transmitter PA +10dbm

Operating frequency: 315 – 480 MHz

System operates works on signal hop mechanism. Signal transmission happens at more than 12-15 predefined frequencies

Modulation type: GFSK

Radio IC: CC1100 (Chipcon/TI) sub-GHz frequency

Data packet error correction mechanism: FEC

Battery and operating voltage:

12 Volt (DC battery)

Battery model: 23A

Battery type: Alkaline (dry)

Battery replaceable: Yes

Battery rechargeable: No

Battery mounting: Inside the back box

Battery life: 3-4years, depending on the usage

RF antenna:

PCB trace antenna / wire coil antenna / metal antenna (depends on environment necessity)

Mounting provisions:

The for switch can be mounted below any table or concealed underneath a platform

Application and features:

Bank security sirens, cash counter alerting mechanisms in offices, ticket counters, kiosk etc.

The foot switch can be used even by doctors in OPDs to call the attendant on duty, or even mangers in offices to summon peon or pantry waiter.

Receiver Alarm with 108db Siren

Model: FBXWAS01

Technical Product Specification



Precautions and mounting locations:

Receiver unit can mount on the wall or placed on a flat surface like a table / platform.

For indoor purpose use only.

Keep away from metallic enclosures.

Range of audible beeping sound:

Around 20-40 meters (108 decibels ambulance/police sound on alert)

Mechanical:

Enclosure type: ABS plastic (color white)

Receiver indicator Size: 180 x 100 x 80 mm

Weight: 280 gms

Environmental Requirement:

Operating Temperature: 0°C to 40°C

Storage Temperature: 5°C to 25°C

Relative Humidity: 5% (0°C) ~ 95% (40°C) RH

Features:

Receiver unit with 108db loud siren alarm

Siren has 3 indicator

- **GREEN:** power on
- **RED:** siren ON/OFF state
- **BLUE:** indicator BLUE SYNC light to check signal reception

Pressing the foot switch transmitter FBXFS01 triggers the siren in continuously ON mode.

The siren can alternatively triggered using the FBX521 remote controller as well.

- Remote TOP button: siren continuously ON
- Remote BOTTOM button: siren OFF
- Center button to turn ON the siren
- (Optional hardware for selected models) Volume adjustment rotating the knob

Technical details:

Receiver indicator sensitivity: -112dbm

Operating frequency: 380 – 480 MHz

System operates works on signal hop mechanism. Signal transmission happens at more than 12-15 predefined frequencies

Modulation type: GFSK

Radio IC: CC1100 (Chipcon/TI) sub-GHz frequency

Data packet error correction mechanism: FEC

Operating voltage:

110-220VAC/50-60Hz to 12VDC converter adapter (supplied)

Users can also plug to any 12V external battery. Active working hours depends on the battery power

RF antenna:

PCB trace antenna / wire coil antenna / metal antenna (depends on environment necessity)

Siren Call Button Remote Controller

Model: FBX521



Features:

3 buttons

RED light indicator, glows when any button is pressed

Top button (ON) => send ON/CALL signal to the receiver

Bottom button (OFF) => send OFF/CANCEL signal

Center button (optional), function of which can be altered as per application requirement

Technical details:

Transmitter PA +10dbm

Operating frequency: 315 – 480 MHz

System operates works on signal hop mechanism. Signal transmission happens at more than 12-15 predefined frequencies

Modulation type: GFSK

Radio IC: CC1100 (Chipcon/TI) sub-GHz frequency

Data packet error correction mechanism: FEC

Battery and operating voltage:

12 Volt (DC battery)

Battery model: 23A

Battery type: Alkaline (dry)

Battery replaceable: Yes

Battery rechargeable: No

Battery mounting: Back cover

Battery life: 3-4years, depending on the usage

RF antenna:

PCB trace antenna / wire coil antenna / metal antenna (depends on environment necessity)

Mounting provisions:

Remote controller can be carried in hand or mounted on the wall using a jacket provided along with the package

Application and features:

Nurse call system for hospitals: remote with patients

Steam bath sauna rooms / spas / restaurants etc.

OPD token system for dispensaries: remote with doctors

Office peon calling system: remote with clerk / manager

Guest house attendant call unit: remote with customers in room

Precautions and mounting locations:

Remotes can be hand operated or mounted on the a door / wall / bed / table or any flat surface

Easy mounting of remote jacket with 2 screws

For indoor purpose use only

Keep away from metallic enclosures

Do not connect the battery in opposite direction

Range of communication:

30-40 meters indoors (depending on environmental condition)

100-150 meters outdoors (in open line of sight)

Pressing the button for at least 2-3 seconds improves the range of communication

Mechanical:

Enclosure type: ABS plastic (color white)

Remote controller size: 120 x 40 x 20 mm

Remote controller weight: 45 gms

Environmental Requirement:

Operating Temperature: 0°C to 40°C

Storage Temperature: 5°C to 25°C

Relative Humidity: 5% (0°C) ~ 95% (40°C) RH

Regulated AC Power Supply Adapter

Model: FBXADP12V2A



Important Note:

This product (Model: FBXADP12V2A 12V 2A Power Supply Adapter) is sourced from a qualified vendor. FORBIX SEMICON® performs quality verification at the batch level to ensure baseline specifications are met prior to distribution. However, as a non-manufactured part, this adapter is expressly excluded from the standard FORBIX SEMICON® product warranty.

Environmental Requirement:

Operating Temperature: 0°C to 40°C

Storage Temperature: 5°C to 25°C

Relative Humidity: 5% (0°C) ~ 95% (40°C) RH

Mechanical:

Enclosure: 80mm (L) × 50mm (W) × 30mm (H) Input

Connector : 2 Pin Input plug

Out Cord: UL1185 18AWG VW-1 80° 300V, FT1 Line with word on the cord Length: 0.6m - 1.2m

DC Plug : 5.5mm × 2.1mm × 12mm

Input Characteristics:

Rated Voltage: 100 – 240V AC Variation

Range: 90 – 264V AC

Rated Frequency: 50/60Hz

Variation Frequency: 47 – 63Hz

Input Current: 0.6A Max. @ Any input AC voltage & output full load

Inrush Current: 35A Max. Cold start @ 240V AC input, rated output load & 25°C ambient

AC Leakage Current: 0.25mA Max. @ 240V AC input

Output Characteristics:

Voltage: 12V

Min. Load: 0.01A

Rated Load: 2A

Output Power: 24W

Combined Load / Line Regulation:

Voltage: 12V

Min. Load: 0.01A

Rated Load: 2A

Line Regulation: ± 1%

Load Regulation: ± 3%

Ripple and Noise :

Under normal voltage & nominal load, the ripple & noise are as follows when measure with Max. Bandwidth of 20MHz & parallel 10µF electrolysis capacitor & 0.1µF ceramic capacitor crossed connect at testing point.

Ripple & Noise (Max.): 120mVp-p

Turn on Delay Time: 2S Max. @ 115V AC input and output Max. Load

Rise Time: 40ms Max. @ 115V AC input and output Max. Load

Hold Up Time: 5msec Min. @ 115V AC input and output Max.

Load Efficiency: Average efficiency 87.4% minimum @ 25%, 50%, 75% & 100% of full-loading and 230V AC input (After warm up 30 minutes).

Remote Controller Battery

Model: A23



Important Note:

This product (Model: A23 12V Alkaline Battery) is sourced from a qualified vendor. FORBIX SEMICON® performs quality verification at the batch level to ensure baseline specifications are met prior to distribution. However, as a non-manufactured part, this adapter is expressly excluded from the standard FORBIX SEMICON® product warranty.

Environmental Requirement:

Operating Temperature: 0°C to 40°C
 Storage Temperature : 5°C to 55°C
 Relative Humidity : 5% (0°C) ~ 95% (35°C) RH
 ≥90 % remaining capacity after 12 months storage
 Storage should not be more than Max. 3 yrs.

Mechanical:

Unit Weight: 7.9 gms
 Height: 27.70 – 28.50 mm
 Diameter: 9.90 – 10.6 mm
 Positive Terminal Head Diameter: 5.2 – 5.8 mm

Battery type: Alkaline

Composition: Manganese Dioxide (mercury free) Battery model: A23

Chemical System: Zn / KOH-H₂O / MnO₂ Conditions

Nominal voltage: 12 V

Open circuit voltage: 12.3...12.9 V

New battery 12.2...12.9 V

Voltage drop 10.8...10.5 V after 1 year storage at 20°C all measurements at 22 ± 2°C ambient

Capacity rated: 50 mAh discharge under 10kΩ load 24hours/day

End Voltage (EV): 6.0V minimum: 47 mAh discharge under 10kΩ load; 24hours/day

End Voltage (EV): 6.0V Standard discharge time nominal: 55 h at 10kΩ load new battery

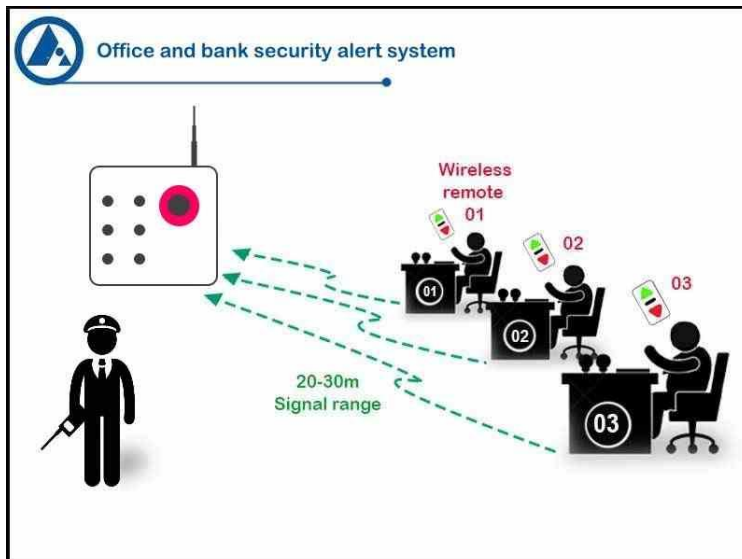
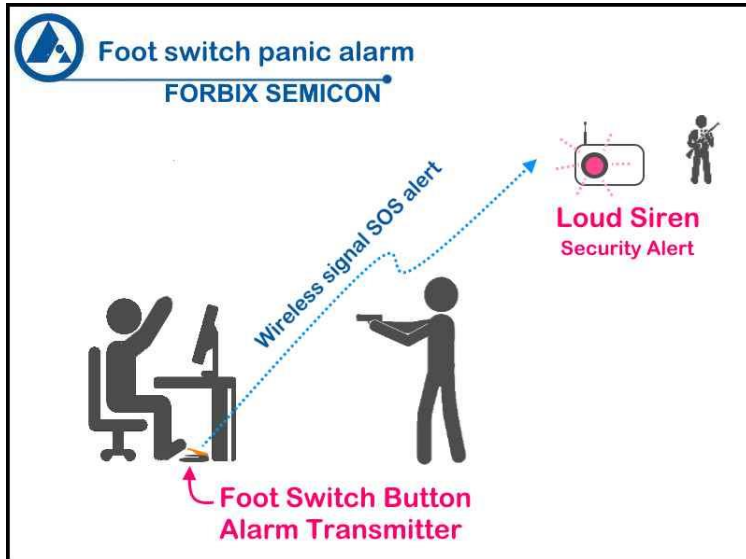
EV: 6.0V MAD: (minimum average 50 h at 10kΩ load after 12 months storage at 20°C duration)

EV: 6.0V 52 h at 10kΩ load for IQC measurement EV: 6.0V (tested within 30 days after delivery)

Discharge currents standard: 0.05 mA max.

recommended current under continuous discharge: 0.5 mA max. recommended current under pulse discharge: 15 mA

Application Images of Wireless Foot Switch Alarm System



Revision History

Version	Changes	Time	Verified	Approved
v1.0	Initial Release Copy	Feb'2026	Yes	-

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