tyco

NEKA
Outdoor Self-Powered Siren
Installation Instructions

Johnson Controls

Description

The **NEKA** range provides the following models:

- **NEKA**, self-powered horn with flash;
- **NEKA-F**, self-powered horn with flash and foam tamper device;
- **NEKA-FS**, self-powered horn with strobe and foam tamper device.

☞ *Not all models are available in your country. Check with your dealer for the models that are available in your country.*

This manual provided installation instructions for all **NEKA** sirens. Information relating to a specific model is denoted by the applicable model number within the text. The term "siren" is used to describe functionality that is applicable to all series.

This siren is a self-powered microprocessor controlled horn strobe/flash, especially designed to provide differentiated audible and visual alarm signals.

The distinctive low profile shape is acoustically very efficient and ensures uniform sound distribution.

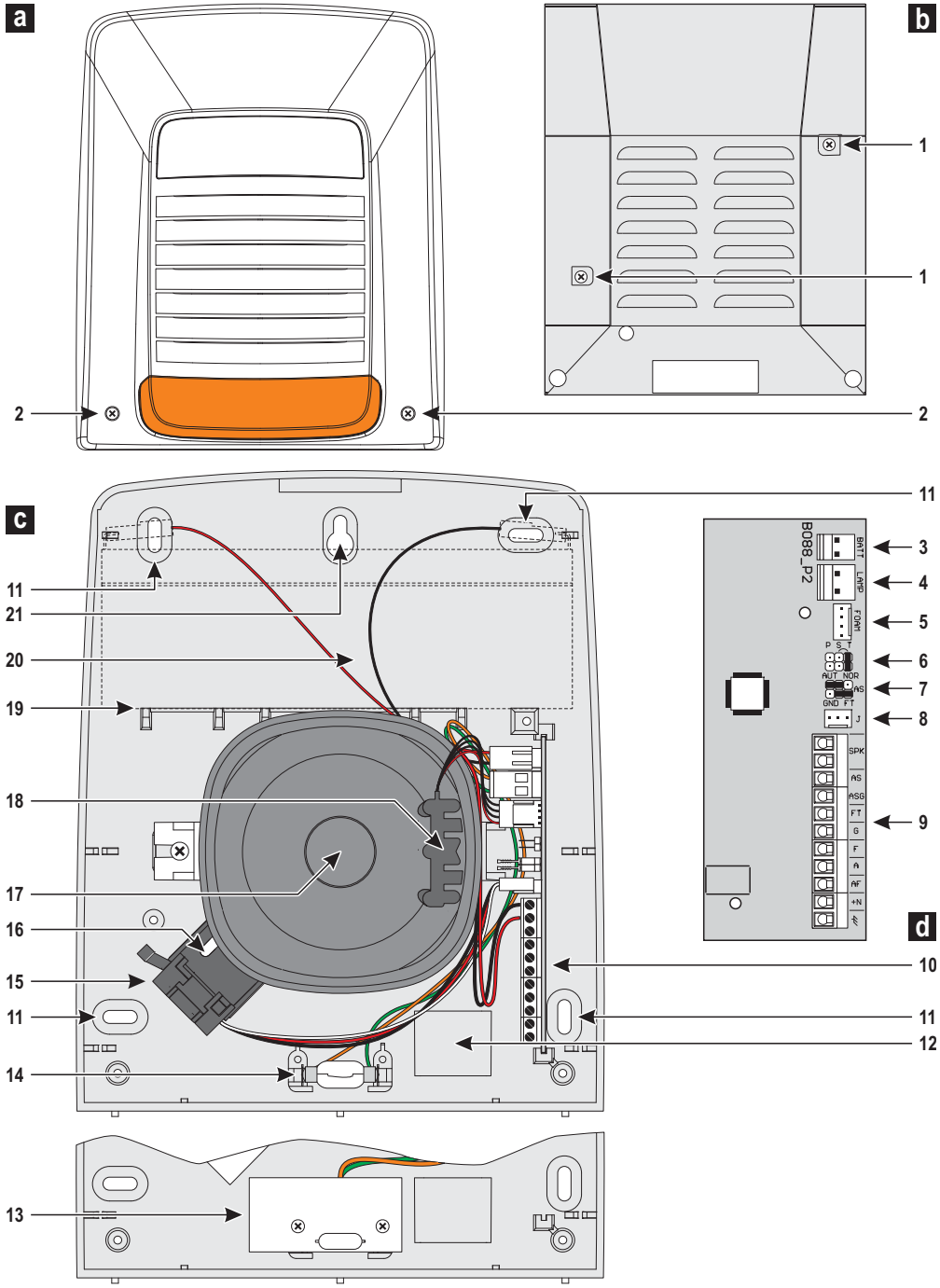
Robust construction and state-of-the-art technology greatly extend application flexibility, whilst microprocessor supervision of the battery charge (**NEKA** and **NEKA-F** only), horn and flash ensure maximum performance and reliability.

Parts

1	Screws (2) for innerplate fixing.	12	Cable entry.
2	Screws (2) for cover fixing.	13	Strobe board (**NEKA-FS** only).
3	Battery connector.	14	Flash bulb (**NEKA** and **NEKA-F** only).
4	Connector for strobe board or flash bulb.	15	Tamper device.
5	Connector for foam tamper device.	16	Hole for wall-tamper plate fixing.
6	Jumpers for operating mode setup.	17	Loudspeaker.
7	Jumpers for tamper mode setup.	18	Foam tamper device (**NEKA-F** and **NEKA-FS** only).
8	Connector for tamper device switch.	19	Battery location.
9	Terminal board.	20	Battery connection cable.
10	Electronic board.	21	Hole for siren temporary hanging.
11	Backplate anchor screw locations (4).		

Table 1 – *Parts.*

Figure 1 – *Parts: a) cover; b) innerplate; c) backplate; e) Electronic board.*



General features

- ❑ Self-powered microprocessor controlled horn with strobe/flash for outdoor applications.
- ❑ New design.
- ❑ Strong weatherproof plastic material moulding.
- ❑ Passivated-steel innerplate.
- ❑ 4 audible and visual signal inputs.
- ❑ Modulated frequency sound emission with sound options.
- ❑ High output magnetodynamic exponential horn with test circuit.
- ❑ Protected against tamper, wall tamper, flash bulb damage and wire cutting.
- ❑ Foam tamper device (**NEKA-F** and **NEKA-FS** only).
- ❑ Programmable maximum alarm time.
- ❑ Battery test circuit with flash shutdown under low battery or battery trouble conditions (**NEKA** and **NEKA-F** only).
- ❑ Drilling pattern for easy installation.
- ❑ Houses 12 V, 2 Ah, buffer battery.

Box

The hard wearing plastic moulding is resistant to the most adverse weather conditions. The louver grille has been especially designed to protect the internal components against rain while maximizing sound emission. The passivated-steel innerplate provides extra protection against sabotage.

Tamper protection

The tamper device (must be anchored to the wall) triggers alarms when either the frontplate or innerplate is removed, or when the siren is pulled from the wall (wall tamper). The foam tamper protection (**NEKA-F** and **NEKA-FS** only) comprises an active infrared barrier with a dual detector that provides high immunity to false alarms (caused by insects).

The siren can operate in normal or automatic mode. In normal mode, the siren opens the **AS** and **ASG** terminals when tampered. These terminals have to be connected to control panel tamper line that activates the siren (and other types of signalling, depending on requirements) through **+N**, **AF**, **A** or **F** terminals.

In automatic mode, the siren independently activates the acoustic and optical signalling for tamper events: **AS** and **ASG** terminals do not need to be connected to tamper line but the control panel will not know the siren tamper status. In automatic mode, the tamper alarm ends when 40 seconds after all causes have been removed, or when maximum alarm time elapses.

Activation

The siren can be activated by the tamper device, and by **+N**, **AF**, **A** and **F** terminals. For example: the siren activates when the voltage fails on terminal **+N**. This operating mode allows the siren to detect wire cutting, as this terminal also supplies the power and battery charge. The polarity programmable **AF**, **A** and **F** terminals can be used for connection to other devices.

☞ *The siren blocks for 4 minutes if it receives most then 6 activating requests in 4 minutes. This is to protect against control panel malfunction.*

Signalling

The audible and visual signals on the loudspeaker and strobe/flash depend on the type of alarm, and the alarm signal configuration. The sound modulation generate a shrill tone — intended to discourage intruders, and a low tone — to ensure good audibility. It is possible to select two audible signals patterns for alarm Inputs — with the exception of the internal tamper event which has only one audible signal (up-scale modulated frequency between 800 and 2000 Hz). The audible signals and modulated frequency range can be found in “Setting the operating mode” on page 7. There are two frequency ranges: 800/2000 Hz and 1100/2400 Hz. The audible signalling will stop as soon as the maximum alarm time expires, whereas, the visual signalling will continue until the alarm conditions clear (memory flashing).

The Memory and Alarm flash sequences are as follows:

NEKA/NEKA-F	ON (ms)	OFF (ms)	Description
Alarm flashing	250	750	Standard Blink
Memory flashing	250	1500	Slow Blink

NEKA-FS	Frequency (Hz)	Description
Alarm flashing	1	Standard Blink
Memory flashing	0.6	Slow Blink

Under low battery conditions, the siren disables the flash and uses the residual charge to power the loudspeaker (**NEKA** and **NEKA-F** only). Low battery is signalled on terminal **G** (**NEKA** and **NEKA-F** only). This terminal (open collector) is connected to ground during standby status, but disconnects in the event of low battery (**NEKA** and **NEKA-F** only), or damage to the loudspeaker or flash.

When **S** and **T**'s pins are connected as shown at the side, siren activation is inhibited and the siren displays troubles as follows.

- No Trouble: the loudspeaker emits an acoustic signal and the flash blinks once.
- Battery trouble: the loudspeaker emits two acoustic signals and, if battery charge is sufficient, the flash blinks twice.
- Flash trouble: the loudspeaker emits three acoustic signals.
- Loudspeaker trouble: the flash blinks four times.

The above listed signals are displayed every 5 seconds until the troubles are cleared or the jumper is removed. The siren runs the power-up sequence when the jumper is removed.

☞ *If troubles are not present, the inhibition of siren activation is delayed between 30 seconds and 2 minutes, to prevent this function being used to tamper the siren.*

☞ *In this mode, foam tamper device can be tested as* **FT** *output activates as soon as the infrared beam is interrupted (***NEKA-F** *and* **NEKA-FS** *only).*

Alarm priority

The siren priority is as follows:

Alarm	Priority
Internal tamper	1
+N	2
AF	3
A	4
F	4

Higher priority alarms always overrides lower priority alarms, generating a variation in the audible signal.

☞ **A** *and* **F** *terminals have the same priority because the acoustic signalling activated by terminal* **A** *does not interfere with the optical signalling activated by terminal* **F**.

The alarm time is counted from activation of the loudspeaker and strobe/flash.

When the maximum alarm time of the higher priority alarm expires, or when the alarm conditions clear, the lower priority alarm signal activates the loudspeaker and strobe/flash in accordance with its configuration.

If a priority alarm signal overrides an alarm that has been running for more than 30 seconds, the alarm timer of the interrupted signal will continue running.

If the priority alarm terminates (due to timeout or restoral) before the maximum alarm time of the interrupted signal expires, the latter activates the loudspeaker and strobe/flash for the residual time.

If a priority alarm signal overrides an alarm that has been running for less than 30 seconds, the alarm timer of the interrupted signal will freeze. If the interrupted alarm signal is still present when the priority alarm terminates (due to timeout or restoral), it activates the loudspeaker and strobe/flash in accordance with its configuration. If the interrupted alarm signal has restored when the priority alarm terminates (due to timeout or restoral), it activates the loudspeaker and strobe/flash for 30 seconds. Figure 2 shows how the lower priority alarm signal **A** activates the horn and strobe/flash after the higher priority alarm (alarm signal **+N**) has been executed.

Memory flashing will stop (after the maximum alarm-time) when all the signals, that triggered the alarm, restore to standby for 5 seconds (restoral time). Internal tamper restoral requires 40 seconds.

Figure 2 shows an example on how signalling devices (optical and acoustic) work for a particular activation sequence.

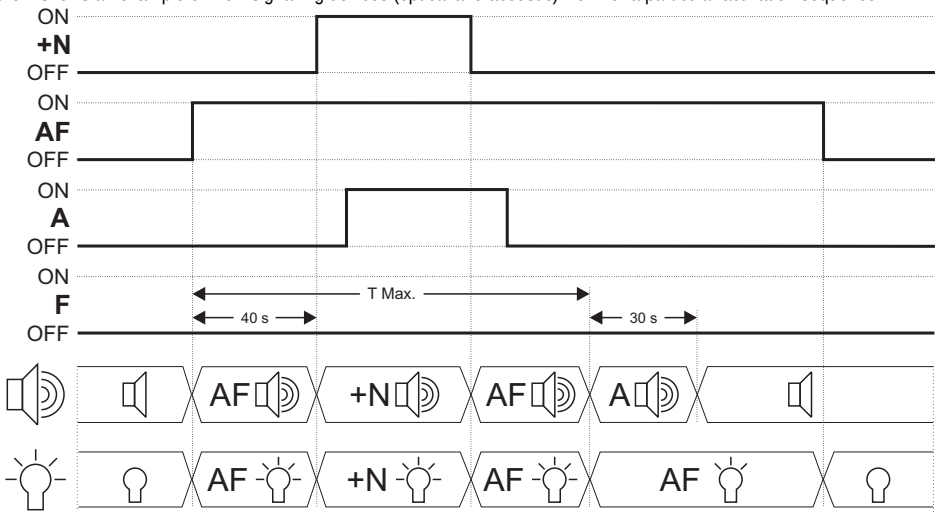


Figure 2 – *Alarm priority:* *standard flashing;* *memory flashing.*

Setting the operating mode

If you are installing several sirens in the same area, the jumpers on the electronic board allow to select different sound for each one, thus permitting users to distinguish between them. You can also select different sounds for different alarm types (gas leak, burglary, flooding, etc.) or locations (office, warehouse, garage, etc.). This feature allows users to recognize the alarm type and its location. Jumpers **S** allows to select the sounds for inputs **+N**, **AF** and **A**. Other jumpers allow to set the maximum alarm time, the input polarity and internal tamper mode. For the various programming options provides by the jumpers refer to table 2 (first column shows the default). For the frequency profile of the audible signals refer to "Available sounds" on page 15.

Maximum alarm time			
T 	10 minutes	**T** 	3 minutes
Alarm sound			
S 	Tamper (automatic mode): Up scale modulation **LF**. **+N**: Up and down scale modulation (**LF**). **AF**: Up and down scale modulation (**HF**). **A**: Multitone **HF**.	**S** 	Tamper (automatic mode): Up scale modulation **LF**. **+N**: Up and down scale modulation (**HF**). **AF**: Up scale modulation **HF**. **A**: Up and down scale modulation **LF**.
AF, **A** and **F input activation polarity**			
P 	Inputs on standby when disconnected. Inputs activate when connected to negative.	**P** 	Inputs on standby when connected to negative. Inputs activate when disconnected. ☞ *If this option is selected, not used inputs must be connected to ⏚ terminal.*
Trouble signalling			
			Trouble signalling ON (test mode): alarm activation is inhibited.
Tamper mode			
	Automatic mode: automatic activation of the siren for tamper.		Normal mode: the siren must be connected to the control panel tamper line.
Foam-tamper mode (**NEKA-F/NEKA-FS** only)			
	Foam tamper generates a tamper alarm like siren opening and siren wall removal.		Foam tamper generates an alarm independent from siren opening and siren wall removal.

Table 2 – *Jumper description.* **HF** *and* **LF** *indicate the sound frequency range:* **HF** *= 1100/2400 Hz,* **LF** *= 800/2000 Hz.*

Mounting

The siren should be mounted as high up as possible on a flat wall. Uneven surfaces may jeopardize proper functioning of wall-tamper protection.

To facilitate the mounting operation, a drilling pattern and screws for fixing are in the package. On the drilling pattern are drawn 5 holes, corresponding to those of fixing, placed on the bottom of the siren.

Proceed as described below (see figure 1 on page 3).

If you have to mount the **KIT-F** foam tamper, read "Mounting the KIT-F foam tamper" on page 8 before mounting the siren.

☞ *Make sure that the strobe flash is connected before powering the siren, otherwise the flash may not work properly (***NEKA-FS** *only).*

1. Place the drilling pattern on the wall with PC opening over the wiring cable: make sure the drilling pattern is level.
2. Mark the anchor screw holes F1, F2, F3, F4 e F5.

☞ *Make sure to mark the upper side of F2 hole.*

3. Mark the wall-tamper anchor screw hole F6.
4. Take off the drilling pattern.
5. Drill the marked holes.
6. Insert the wall plugs in the holes.
7. Insert a screw into hole F2 and tighten it until the head is about 1 cm from the wall.
8. Pull the wires through the cable entry 12 and hang the siren on the screw in hole 21.
9. Fix the siren permanently through the holes 11.
10. Fix the wall-tamper plate through the hole 16, without tightening the screw too much in order not to break the stop tabs.
11. Set the siren operating mode by means of the jumpers 6 and 7 and make the connections on the terminal board 9.
12. Place the battery on shelf 19 and then connect it to connector 3 (**BATT**) via cable 20: the flash starts to blink in alarm memory mode (slow blink).

☞ *Tamper protection is not active until the cover and the inner-cover of the siren are closed, and until the +***N** *terminal is powered for at least 20 seconds.*

☞ *The foam tamper device can be tested in this phase because* **FT** *output activates as soon as the device infrared barrier is interrupted (***NEKA-F** *and* **NEKA-FS** *only).*

13. Put in place the inner cover and fix it by means the screws 1.

⚠ *Be careful not to cause a short circuit by touching the flash contacts.*

14. Put in place the cover and fix it by means the screws 2: the flash blinks in alarm mode for 20 seconds (standard blink).

☞ *If the cover or inner cover is removed, the 20 seconds reset and the flash restart to blink in alarm memory mode (step 12).*

15. Apply the voltage on +**N** terminal: the siren becomes operational when 20 seconds have elapsed from the +**N** power supply.

☞ *If the voltage on +***N** *terminal fails before 20 seconds have elapsed, the 20 seconds reset and the flash continues to blink in alarm mode (step 14).*

Mounting the **KIT-F** foam tamper

To mount the **KIT-F** foam tamper, proceed as outlined following.

1. Insert the foam tamper (18) on the loudspeaker (17), as shown in figure 1 on page 3: push down the foam tamper on the loudspeaker until you hear a snap.
2. Connect the foam tamper to the **FOAM** connector (5) of the siren's electronic board.

T.	Description
SPK	Loudspeaker connection terminals.
AS **ASG**	Tamper signalling terminals: when tamper signalling is set to normal mode, these terminals open when the cover or innerplate is removed, or when siren is pulled from the wall, or when the foam tamper is detected (**NEKA-F** and **NEKA-FS** only).
FT	Foam tamper signalling terminal (**NEKA-F** and **NEKA-FS** only): open-collector normally closed to ground, it opens when at least 30 seconds has been elapsed from interruption of the device infrared barrier. ☞ *This terminal is disabled when tamper signalling is in automatic mode (* ) and siren is automatically activated by foam tamper too ().
G	Trouble signal terminal: open-collector normally closed to ground, opens for low battery and battery trouble (**NEKA** and **NEKA-F** only), loudspeaker trouble, flash bulb damage (strobe board not present).
F	Alarm activation terminal with programmable polarity (optical signalling only).
A	Alarm activation terminal with programmable polarity (acoustic signalling only).
AF	Acoustic and optical signalling activation terminal, with programmable polarity.
+N	Power supply (positive) and alarm terminal. 13.8 V must be applied to this terminal for the battery charge. If this voltage fails (wire cutting or alarm) the siren go into alarm status (acoustic and optical signalling).
⏚	Negative supply terminal and ground of the internal circuit. ☞ *Be sure to connect the terminal ⏚ to the common terminal on the control panel and not to the earth terminal.*

Table 3 – *Terminal description.*

☞ *Use shielded cable only, with one end connected to the control panel negative and the other left free.*

Automatic mode

For siren basic operation are required two wires only, as shown in figure 3: the control panel (A) must have a terminal (**+N**) where 13.8 V voltage (minimum 600 mA) is present on standby and no voltage in alarm; the control panel cannot detects the siren tamper, and foam tamper (**NEKA-F** and **NEKA-FS** only) but the siren automatically activates for those events.

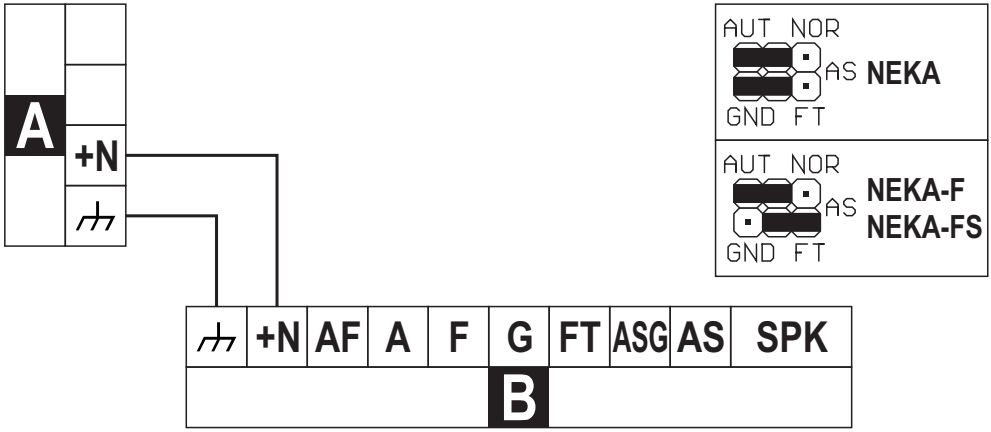


Figure 3 – *Automatic mode: A) control panel; B) siren.*

Automatic mode with independent management of foam tamper (NEKA-F/NEKA-FS only)

If foam tamper have to be managed by the control panel, jumpers position must be as shown in figure 4, and **FT** terminal of the siren (B) must be connected to an input line of the control panel (A) that is on standby when connected to ground and in alarm when floating (**Z** terminal in the figure).

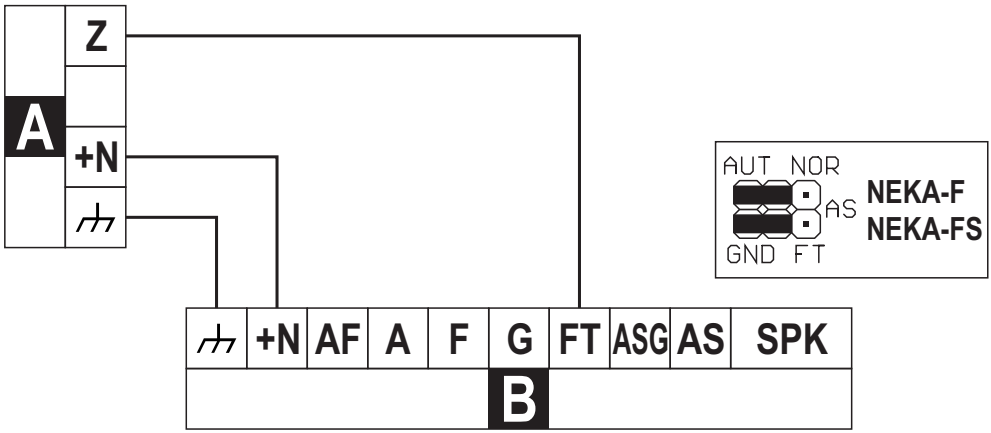


Figure 4 – *Automatic mode with independent management of foam tamper: A) control panel; B) siren.*

Normal mode

If siren tamper, and foam tamper (**NEKA-F/NEKA-FS** only) have to be managed by the control panel, jumpers position must be as shown in figure 5, and **AS** terminal of the siren must be connected to the tamper line of the latest device: in this operating mode, **AS** terminal of the siren is normally connected to the ground while is open for siren tamper or foam tamper.

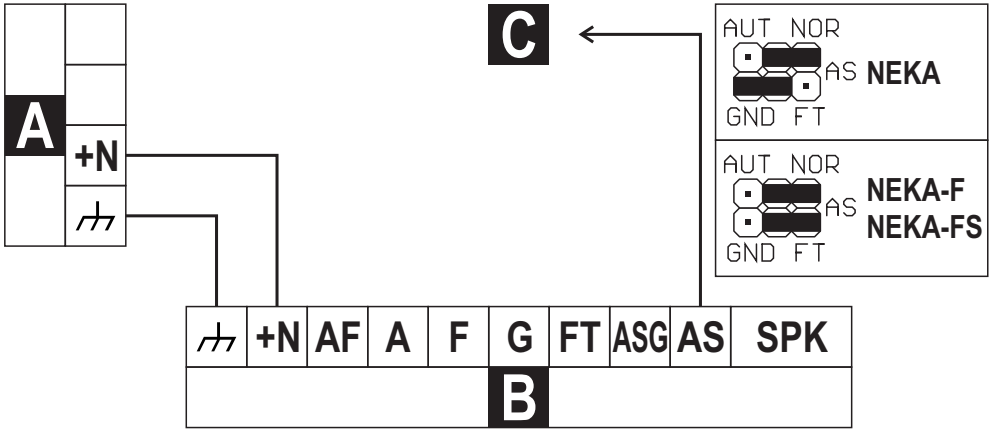


Figure 5 – *Normal mode: A) control panel; B) siren; C) to second-last device on tamper line.*

Normal mode with independent management of foam tamper (NEKA-F/NEKA-FS only)

If foam tamper have to managed by control panel independently from the siren tamper, jumper positions must be as shown in figure 6, and **FT** terminal of the siren (B) must be connected to an input line of the control panel (A) that is on standby when connected to ground and in alarm when floating (**Z** terminal in the figure).

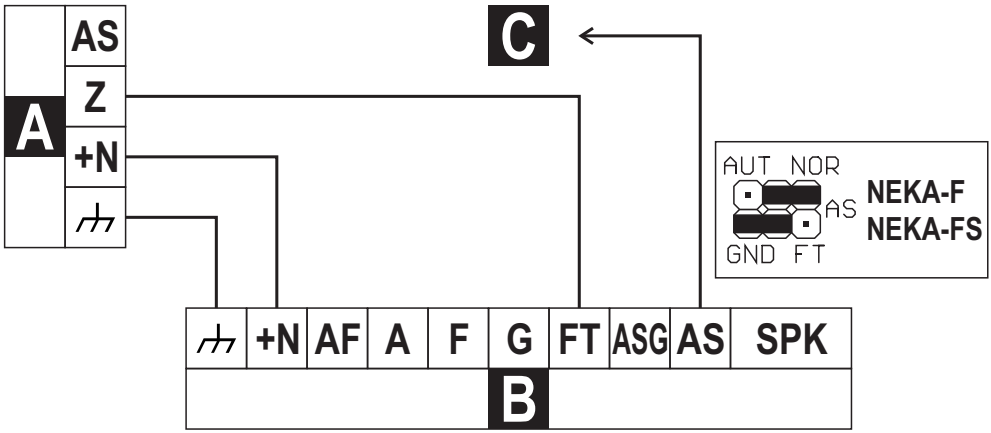


Figure 6 – *Normal mode with independent management of foam tamper: A) control panel; B) siren; C) to second-last device on tamper line.*

Normal mode when the siren is not latest device on tamper line

If the siren is not the latest device on tamper line, jumper position must be as shown in figure 7, and **ASG** and **AS** terminals of the siren must be series connected to the tamper line: **ASG** and **AS** terminals of the siren are normally connected, and disconnect for siren tamper. The **FT** terminal have to be connected for **NEKA-F/NEKA-FS** sirens only.

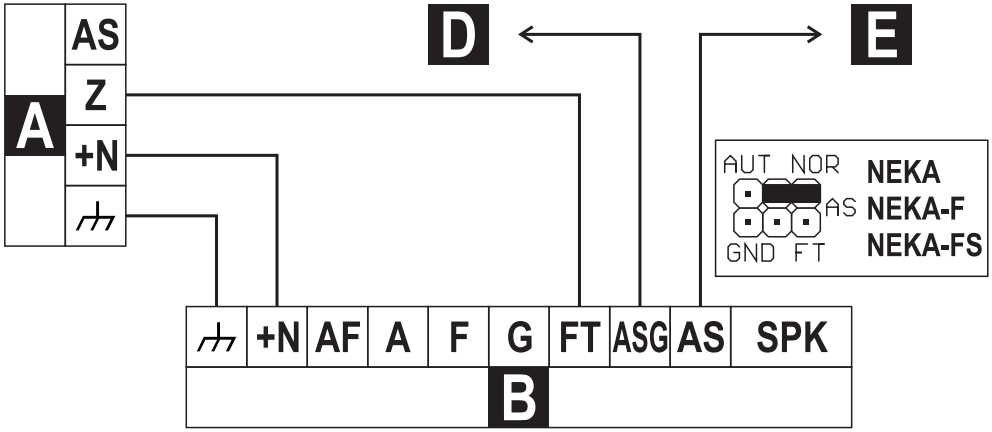


Figure 7 – *Normal mode when the siren is not latest device on tamper line: A) control panel; B) siren; D) to previous device on tamper line; E) to next device on tamper line.*

Other modes for siren activation

If the control panel do not have a terminal where 13.8 V voltage is present on standby, and no voltage in alarm, it is possible to simulate one by means of the free-voltage contacts of alarm relay, as shown in figure 8.

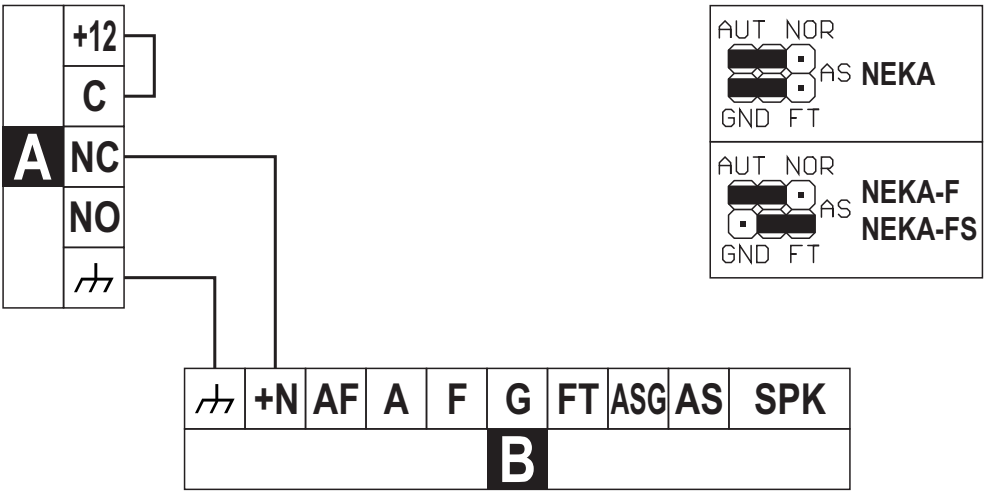


Figure 8 – *Activation by means of the free-voltage contacts of alarm relay: A) control panel; B) siren.*

Figures 9 and 10 show, instead, wiring to activate the siren by means an open-collector output (the **OC** terminal of the control panel **A**): **P** jumper must be inserted if the **OC** output closes to ground on alarm, must be removed if **OC** output opens on alarm. On + terminal of the control panel 13.8 V voltage (minimum 600 mA) must be present for siren power supply, and siren battery charging.

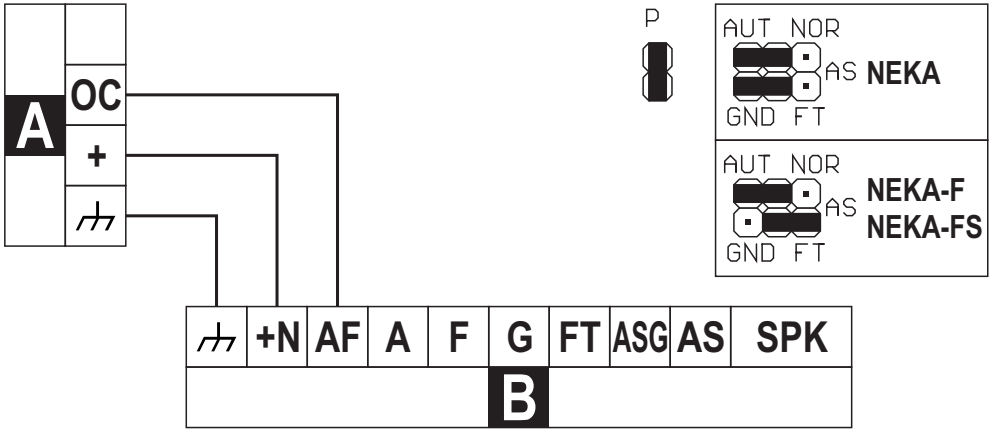


Figure 9 – *Wiring to activate the siren by means an open-collector output that closes to ground on alarm: A) control panel; B) siren.*

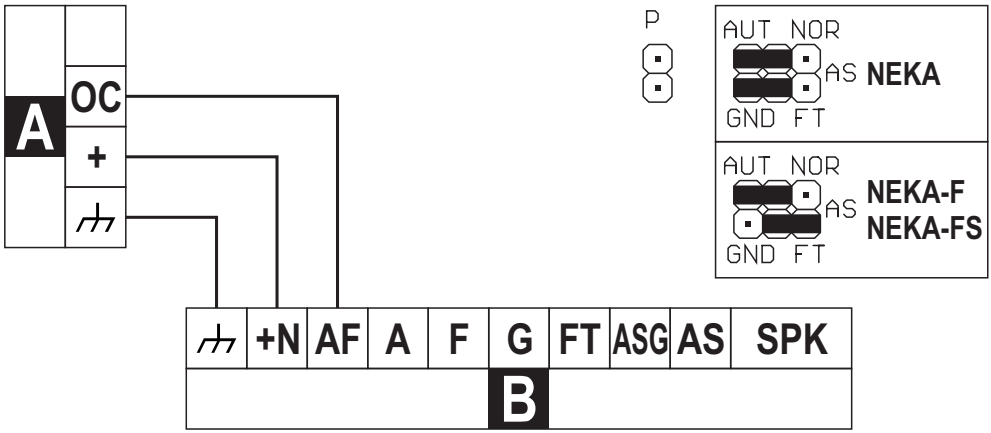


Figure 10 – *Wiring to activate the siren by means an open-collector output that opens on alarm: A) control panel; B) siren.*

☞ *Acoustic signalling activation by means the* **A** *terminal and optical signalling activation by means the F terminal can be done in the same way.*

Problem	Cause	Solution
The battery is connected but the flash does not function.	The battery may be low.	Replace the battery.
Continuous flashing and/or continuous sound on the loudspeaker.	1) The wall-tamper device is not secured properly. 2) The cover or the metal innerplate is not closed properly.	Eliminate the causes.
The loudspeaker sounds but the flash does not function.	1) The battery may be low. 2) The flash may be out-of-order.	1) Replace the battery if necessary. 2) Change the flash bulb or call the installer.
The flash functions but the loud-speaker is silent.	1) More than the maximum alarm-time has elapsed since the start of audible signalling. 2) The loudspeaker is out-of-order. 3) The siren has been activated more than six times in 4 minutes.	1) Eliminate the causes of alarm. 2) Call the installer. 3) Wait 4 minutes with no siren activa-tion.
It is impossible to activate the siren.	1) The installation-time has not expired. 2) The battery is low.	1) Wait 20 seconds. 2) Replace the battery if necessary.

Table 4 – *Trouble shooting.*

Nominal voltage: 13.8 V⎓

Alarm current: 1.4 A (max 2.8 A)

Voltage on terminal +N: 13.8 V ±0.2 V

Current on terminal +N: max 0.6 A

Minimum (maximum) supply voltage: 10 V⎓ (13.8 V⎓)

Battery requirements: 2 Ah (177x34x66 mm)

Maximum alarm-time (programmable): 3 / 10 minutes

Protection class: IP34

Temperature range: -25 – +55 C°

Dimensions (WxHxD): 208x252x98 mm

Weight (without battery): 2300 g

Available sounds

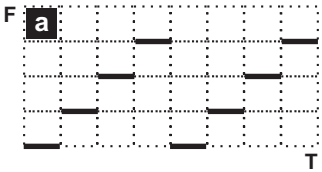
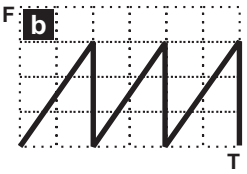
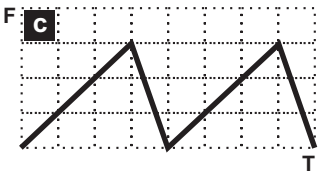
Type of sound		Frequencies	Period	Sound level at 3 m
Multitone		1108 Hz for 200 mS 1244 Hz for 180 mS 1396 Hz for 150 mS 1567 Hz for 145 mS 1760 Hz for 110 mS 2123 Hz for 100 mS 2430 Hz for 90 mS	0.3 s	106 dB(A)
Up scale modulation (LF)		800 - 2000 Hz	0.3 s	104 dB(A)
Up scale modulation (HF)		1100 - 2400 Hz		105 dB(A)
Up and down scale modulation (LF)		800 - 2000 Hz	0.6 s	104 dB(A)
Up and down scale modulation (HF)		1100 - 2400 Hz		105 dB(A)

Table 5 – *Available sounds.*

Compliance with standards

Hereby Tyco Safety Products Canada Ltd. declares that the product **NEKA** complies with standards EN 60950, EN 61000-6-3, EN 50130-4 and thereby, complies with the essential requirement of directives 2014/35/EU, 2014/30/EU and 2011/65/EU.

Waste electrical and electronic equipment (WEEE) directive

In the European Union, this label indicates that this product should NOT be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

Limited Warranty

Digital Security Controls warrants the original purchaser that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use. During the warranty period, Digital Security Controls shall, at its option, repair or replace any defective product upon return of the product to its factory, at no charge for labour and materials. Any replacement and/or repaired parts are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. The original purchaser must promptly notify Digital Security Controls in writing that there is defect in material or workmanship, such written notice to be received in all events prior to expiration of the warranty period. There is absolutely no warranty on software and all software products are sold as a user license under the terms of the software license agreement included with the product. The Customer assumes all responsibility for the proper selection, installation, operation and maintenance of any products purchased from DSC. Custom products are only warranted to the extent that they do not function upon delivery. In such cases, DSC can replace or credit at its option.

International Warranty

The warranty for international customers is the same as for any customer within Canada and the United States, with the exception that Digital Security Controls shall not be responsible for any customs fees, taxes, or VAT that may be due.

Warranty Procedure

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. Anyone returning goods to Digital Security Controls must first obtain an authorization number. Digital Security Controls will not accept any shipment whatsoever for which prior authorization has not been obtained.

Conditions to Void Warranty

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

- damage incurred in shipping or handling;
- damage caused by disaster such as fire, flood, wind, earthquake or lightning;
- damage due to causes beyond the control of Digital Security Controls such as excessive voltage, mechanical shock or water damage;
- damage caused by unauthorized attachment, alterations, modifications or foreign objects;
- damage caused by peripherals (unless such peripherals were supplied by Digital Security Controls Ltd.);
- defects caused by failure to provide a suitable installation environment for the products;
- damage caused by use of the products for purposes other than those for which it was designed;
- damage from improper maintenance;
- damage arising out of any other abuse, mishandling or improper application of the products.

Items Not Covered by Warranty

In addition to the items which void the Warranty, the following items shall not be covered by Warranty: (i) freight cost to the repair centre; (ii) products which are not identified with DSC's product label and lot number or serial number; (iii) products disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection or testing to verify any warranty claim. Access cards or tags returned for replacement under warranty will be credited or replaced at DSC's option. Products not covered by this warranty, or otherwise out of warranty due to age, misuse, or damage shall be evaluated, and a repair estimate shall be provided. No repair work will be performed until a valid purchase order is received from the Customer and a Return Merchandise Authorization number (RMA) is issued by DSC's Customer Service.

Digital Security Controls Ltd.'s liability for failure to repair the product under this warranty after a reasonable number of attempts will be limited to a replacement of the product, as the exclusive remedy for breach of warranty. Under no circumstances shall Digital Security Controls be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property. The laws of some jurisdictions limit or do not allow the disclaimer of consequential damages. If the laws of such a jurisdiction apply to any claim by or against DSC, the limitations and disclaimers contained here shall be to the greatest extent permitted by law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so that the above may not apply to you.

Disclaimer of Warranties

This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose) and of all other obligations or liabilities on the part of Digital Security Controls. Digital Security Controls neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product. This disclaimer of warranties and limited warranty are governed by the laws of the province of Ontario, Canada.

WARNING: Digital Security Controls recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Out of Warranty Repairs

Digital Security Controls will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to Digital Security Controls must first obtain an authorization number. Digital Security Controls will not accept any shipment whatsoever for which prior authorization has not been obtained.

Products which Digital Security Controls determines to be repairable will be repaired and returned. A set fee which Digital Security Controls has predetermined and which may be revised from time to time, will be charged for each unit repaired.

Products which Digital Security Controls determines not to be repairable will be replaced by the nearest equivalent product available at that time. The current market price of the replacement product will be charged for each replacement unit.

WARNING - READ CAREFULLY

Note to Installers
This warning contains vital information. As the only individual in contact with system users, it is your responsibility to bring each item in this warning to the attention of the users of this system.

System Failures
This system has been carefully designed to be as effective as possible. There are circumstances, however, involving fire, burglary, or other types of emergencies where it may not provide protection. Any alarm system of any type may be compromised deliberately or may fail to operate as expected for a variety of reasons. Some but not all of these reasons may be:

Inadequate Installation
A security system must be installed properly in order to provide adequate protection. Every installation should be evaluated by a security professional to ensure that all access points and areas are covered. Locks and latches on windows and doors must be secure and operate as intended. Windows, doors, walls, ceilings and other building materials must be of sufficient strength and construction to provide the level of protection expected. A reevaluation must be done during and after any construction activity. An evaluation by the fire and/or police department is highly recommended if this service is available.

Criminal Knowledge
This system contains security features which were known to be effective at the time of manufacture. It is possible for persons with criminal intent to develop techniques which reduce the effectiveness of these features. It is important that a security system be reviewed periodically to ensure that its features remain effective and that it be updated or replaced if it is found that it does not provide the protection expected.

Access by Intruders
Intruders may enter through an unprotected access point, circumvent a sensing device, evade detection by moving through an area of insufficient coverage, disconnect a warning device, or interfere with or prevent the proper operation of the system.

Power Failure
Control units, intrusion detectors, smoke detectors and many other security devices require an adequate power supply for proper operation. If a device operates from batteries, it is possible for the batteries to fail. Even if the batteries have not failed, they must be charged, in good condition and installed correctly. If a device operates only by AC power, any interruption, however brief, will render that device inoperative while it does not have power. Power interruptions of any length are often accompanied by voltage fluctuations which may damage electronic equipment such as a security system. After a power interruption has occurred, immediately conduct a complete system test to ensure that the system operates as intended.

Failure of Replaceable Batteries
This system's wireless transmitters have been designed to provide several years of battery life under normal conditions. The expected battery life is a function of the device environment, usage and type. Ambient conditions such as high humidity, high or low temperatures, or large temperature fluctuations may reduce the expected battery life. While each transmitting device has a low battery monitor which identifies when the batteries need to be replaced, this monitor may fail to operate as expected. Regular testing and maintenance will keep the system in good operating condition.

Compromise of Radio Frequency (Wireless) Devices
Signals may not reach the receiver under all circumstances which could include metal objects placed on or near the radio path or deliberate jamming or other inadvertent radio signal interference.

System Users
A user may not be able to operate a panic or emergency switch possibly due to permanent or temporary physical disability, inability to reach the device in time, or unfamiliarity with the correct operation. It is important that all system users be trained in the correct operation of the alarm system and that they know how to respond when the system indicates an alarm.

Smoke Detectors
Smoke detectors that are a part of this system may not properly alert occupants of a fire for a number of reasons, some of which follow. The smoke detectors may have been improperly installed or positioned. Smoke may not be able to reach the smoke detectors, such as when the fire is in a chimney, walls or roofs, or on the other side of closed doors. Smoke detectors may not detect smoke from fires on another level of the residence or building.

Every fire is different in the amount of smoke produced and the rate of burning. Smoke detectors cannot sense all types of fires equally well. Smoke detectors may not provide timely warning of fires caused by carelessness or safety hazards such as smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches or arson.

Even if the smoke detector operates as intended, there may be circumstances when there is insufficient warning to allow all occupants to escape in time to avoid injury or death.

Motion Detectors
Motion detectors can only detect motion within the designated areas as shown in their respective installation instructions. They cannot discriminate between intruders and intended occupants. Motion detectors do not provide volumetric area protection. They have multiple beams of detection and motion can only be detected in unobstructed areas covered by these beams. They cannot detect motion which occurs behind walls, ceilings, floor, closed doors, glass partitions, glass doors or windows. Any type of tampering whether intentional or unintentional such as masking, painting, or spraying of any material on the lenses, mirrors, windows or any other part of the detection system will impair its proper operation.

Passive infrared motion detectors operate by sensing changes in temperature. However their effectiveness can be reduced when the ambient temperature rises near or above body temperature or if there are intentional or unintentional sources of heat in or near the detection area. Some of these heat sources could be heaters, radiators, stoves, barbeques, fireplaces, sunlight, steam vents, lighting and so on.

Warning Devices
Warning devices such as sirens, bells, horns, or strobes may not warn people or waken someone sleeping if there is an intervening wall or door. If warning devices are located on a different level of the residence or premise, then it is less likely that the occupants will be alerted or awakened. Audible warning devices may be interfered with by other noise sources such as stereos, radios, televisions, air conditioners or other appliances, or passing traffic. Audible warning devices, however loud, may not be heard by a hearing-impaired person.

Telephone Lines
If telephone lines are used to transmit alarms, they may be out of service or busy for certain periods of time. Also an intruder may cut the telephone line or defeat its operation by more sophisticated means which may be difficult to detect.

Insufficient Time
There may be circumstances when the system will operate as intended, yet the occupants will not be protected from the emergency due to their inability to respond to the warnings in a timely manner. If the system is monitored, the response may not occur in time to protect the occupants or their belongings.

Component Failure
Although every effort has been made to make this system as reliable as possible, the system may fail to function as intended due to the failure of a component.

Inadequate Testing
Most problems that would prevent an alarm system from operating as intended can be found by regular testing and maintenance. The complete system should be tested weekly and immediately after a break-in, an attempted break-in, a fire, a storm, an earthquake, an accident, or any kind of construction activity inside or outside the premises. The testing should include all sensing devices, keypads, consoles, alarm indicating devices and any other operational devices that are part of the system.

Security and Insurance
Regardless of its capabilities, an alarm system is not a substitute for property or life insurance. An alarm system also is not a substitute for property owners, renters, or other occupants to act prudently to prevent or minimize the harmful effects of an emergency situation.

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