

5. System Setup Continued

5.1.2. Energizer Trigger Input

When a 10 – 30 Vdc (dry contact setting) or closed contact (wet contact setting) signal is applied to this input, the 24 V output will be activated, given that either the Day/Night Switch Input is also activated, or the Day/Night Switch Input is bypassed.

This input should be wired to a NEMTEK energizer strobe output relay to illuminate the electric fence perimeter, in case of an energizer alarm. The energizer strobe and power supply trigger input should always have the opposite wet/dry contact setting i.e. if the energizer is set for dry contact, the module should be set for wet contact and vice versa.

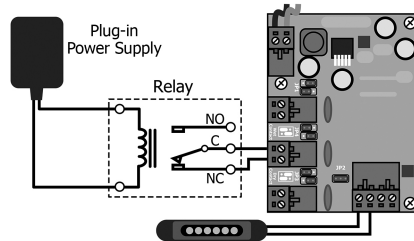
5.1.3. Day/Night Switch Input

This input is wired in series with the Energizer Trigger Input internally. This means the 24 V output will only be activated if both the Energizer Trigger and Day/Night Switch inputs are triggered. This is useful when the owner is away for an extended time and the energizer was in alarm, preventing the lights from shining throughout the day. The input can be triggered with a 10 – 30 Vdc (dry contact setting) or closed contact (wet contact setting) signal. When not used, the input should be bypassed by inserting jumper JP2 (see figures in 5.1.1).

5.1.4. Auxiliary Trigger Input

This input works in the same way as the Energizer Trigger Input, but is independent of the Day/Night Switch Input status. It can be used to connect another source that needs to switch on the perimeter alarm lights, for example, an alarm system output relay or remote control.

The input may also be wired, as in the figure, to switch on the LED lights in the event of a mains power failure. The plug-in power supply is wired to the coil side of the relay, while the normally closed (NC) contact is connected to the Aux Trigger Input of the module.

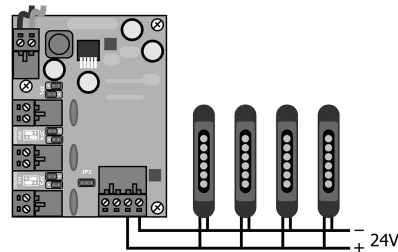


5.2. Light Module Wiring

The LED light modules must be connected in parallel, directly to the 24 V output of the Power Supply Trigger module as shown in the figure. A maximum of 40 light modules can be connected to a single Power Supply Trigger module.

When using the recommended 0.8 mm2 2-core cable supplied by NEMTEK and assuming the lights are spaced uniformly along the length of the cable, the maximum cable length (in meters) can be roughly calculated using:

$$\text{Max Wire Length} = \frac{10500}{\text{Number of lights} + 1}$$

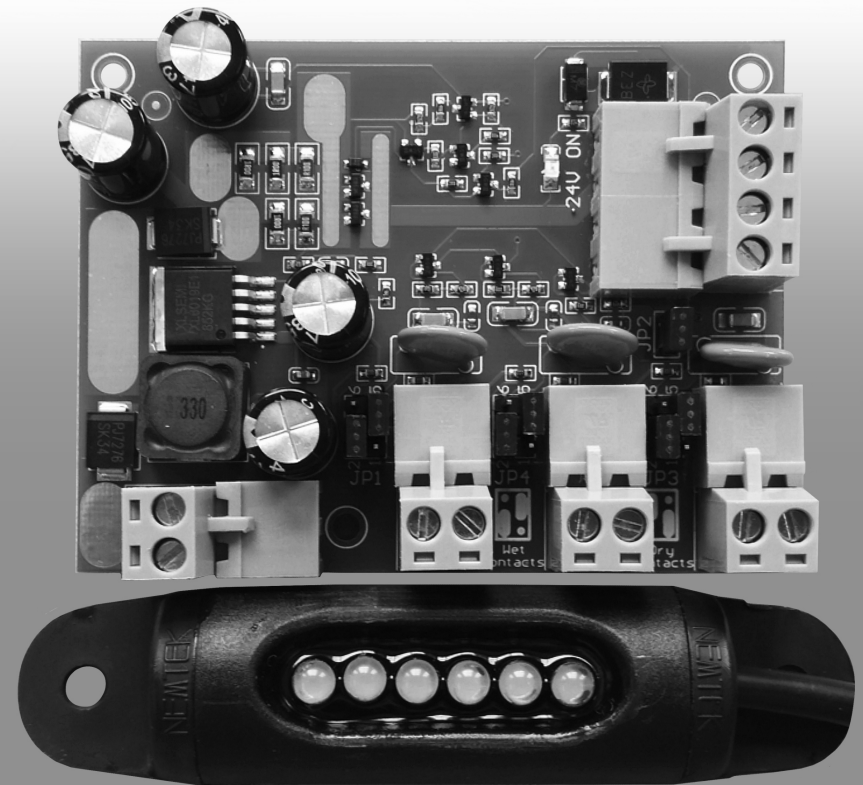


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Perimeter Alarm Indicator System

Installer Manual



Introduction, Disclaimer & Technical Specifications

1. Introduction

The NEMTEK Perimeter Alarm Indicator System provides the user with extended security, by illuminating the area in close proximity to the electric fence, in case of an energizer alarm. The system can also be activated by other auxiliary inputs for example an alarm system, day/night switch or a remote-control button.

The system consists of the LED Light modules and 24V Power Supply Trigger module. To ensure safe and reliable operation, it is highly recommended that only the NEMTEK Power Pack is used as the power supply. The NEMTEK Power Pack also provides battery backup, in case of mains power supply failure.

2. Disclaimer

NEMTEK Holdings (Pty) Ltd or any of its subsidiary companies does not guarantee that the operation of the product will be uninterrupted or totally error free. Product specifications may be altered without prior notification.

3. Technical Specifications

3.1. LED Light Module

Parameter	Value
Input Voltage	20 – 30 Vdc
Current Consumption	20 mA
Operating Temperature	-20 – 55 °C
Minimum Luminous Intensity	99000 mcd
Illumination Angle	30°
IP Rating	IP67
Mounting*	2 x 5 mm holes

*For ease of installation use the NEMTEK Perimeter Alarm Light bracket

3.2. Power Supply Trigger Module

Parameter	Value
Input Voltage	12 Vdc
Maximum Input Current Consumption	2 A
Output Voltage	25.5 Vdc
Maximum Output Current	800 mA* (at 25 °C)
Maximum Number of Connected Light Modules	40
Trigger Input Voltage	10 – 30 Vdc**
Maximum Trigger Input Current Consumption	1.5 mA**
Number of Trigger Inputs	3 (Configurable as Wet or Dry Contacts)
Operating Temperature	-20 – 55 °C
Mounting	3 x 3 mm holes***

*Over-current Protected

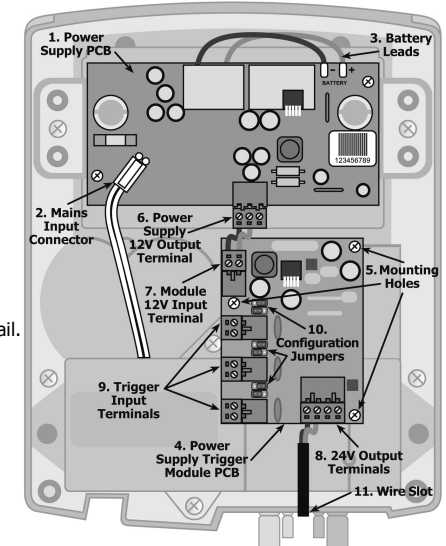
**Jumpers Configured for Dry Contact

***Spaced to Mount Inside NEMTEK Power Pack

4. Power Pack Installation

The NEMTEK Power Pack should be used to supply 12 Vdc to the Power Supply Trigger module. The Power Pack is able to supply backup power to 40 light modules for around 3 hours in the event of a power failure. To mount the Power Supply Trigger module inside the Power Pack, follow the steps below:

- Ensure the mains power (2) and the battery (3) are disconnected.
- Place the Power Supply Trigger module PCB (4) as shown in the diagram, ensuring that the 3 mounting holes (5), align with the screw holes in the power supply unit.
- Connect the module's 12 V input terminals (7) to the Power Pack PCB's 12 V output terminal (6), ensuring the correct polarity.
- Connect the 24 V light supply wires to either of the 24 V output terminals (8), ensuring the correct polarity.
- Connect the trigger input wires to the desired input terminal (9). See section 5.1 for more detail.
- Configure the jumper settings (10). See section 5.1.1 for more detail.
- Route the wires through the slot in the housing (11).
- Reconnect the battery and fit the cover of the power supply, before reconnecting the mains power.



5. System Setup

5.1 Trigger Inputs

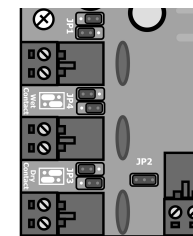
The Power Supply Trigger module has three different input triggers to activate the 24 V output supply and can be configured for different functions as detailed on the right.

5.1.1 Wet/Dry Contact Jumper Settings

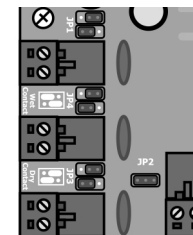
All three inputs can be configured to be either a wet or dry contact, by setting jumpers JP1 for the Energizer Trigger Input, JP4 for the Auxiliary Trigger Input and JP3 for the Day/Night Switch Input, as shown in the figure.

When the input is configured to be wet, the positive (+) side of the contact is internally supplied with 12 V by the module. The external trigger source (energizer, alarm panel, remote switch, day/night switch etc.) should therefore be a potential free (dry) contact, for example, a dry relay contact.

When the input is configured to be dry or potential free, no voltage is applied to the contact. The external trigger source (energizer, alarm panel, remote switch, day/night switch etc.) should apply a 10 – 30 Vdc (wet contact) signal to the contact, for example, a wet relay contact.



Jumpers configured for Wet Contact



Jumpers configured for Dry Contact