

About PGPx920

The PGPx920 is a range extender designed to relay digital data between wireless PowerG devices and a PowerG control panel. Repeaters extend the wireless reach of the system by relaying transmissions to devices that would normally be outside the range of the control panel.

The repeater has the following features:

- Dealer lock down.
- Two-factor authentication
- Front and back tamper detection.
- Mains powered, with rechargeable 48-hour backup battery.
- AC power fail report.
- Visible signal quality indication.
- PowerG two-way frequency hopping spread spectrum (FHSS) technology.
- LED indications for power failure, activity, and installation performance diagnostics.
- Remote firmware upgrade.

Installation guidelines

The reference to PGPx920 throughout this manual includes the model PGP9920.

⚠ CAUTION: Only qualified personnel may install this equipment. Place this device in non-hazardous indoor locations only.

➤ Important: Check the device and the entire alarm system weekly to ensure optimal performance.

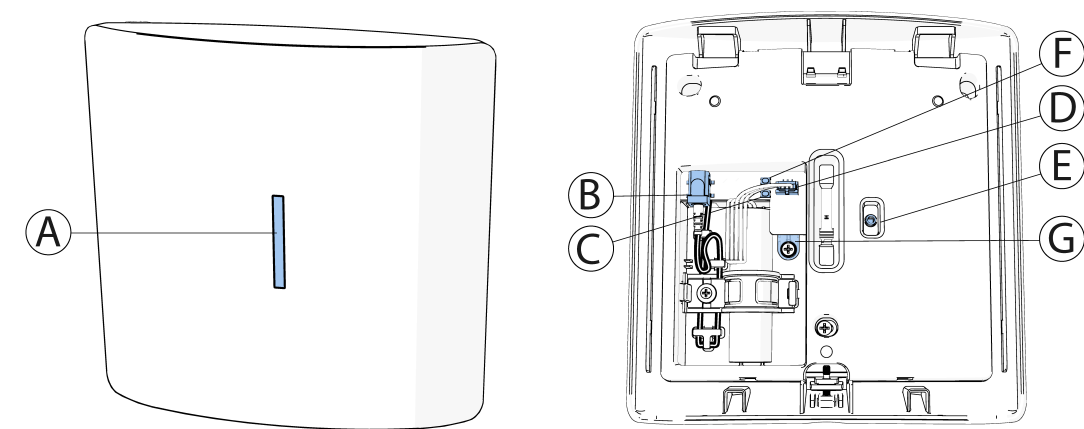
① Note: To comply with FCC and ISED RF exposure compliance requirements, locate the device at a distance of at least 20 cm from all persons during normal operation.

Do not co-locate the antennas used for this product, or operate them in conjunction with any other antenna or transmitter.

Install the PGP9920 in accordance with the Standard for Installation and Classification of Residential Burglar Alarm Systems, UL 1641 and ULC-S302.



Figure 1: PGPx920 external and internal views



Callout	Description
A	LED
B	DC jack
C	Test button
D	Battery cable connector
E	Front tamper
F	Enroll button
G	Breakaway segment

For more information refer to section [About PGPx920](#).

Adhere to the following instructions when choosing the installation location:

- Do not install the repeater near metal cabinets, metal doors, metal chimneys, or reinforced concrete walls.
- Do not use extension cords to plug in the power supply of the repeater.
- Do not install the repeater near heaters, air conditioners, ventilators, or refrigerators.
- Do not connect the repeater to electrical outlets on the same circuit as large appliances.
- Avoid places that expose the repeater to direct sunlight, excessive heat, moisture, vapors, chemicals, or dust.
- Do not install the repeater near water.
- Do not install the repeater and its accessories in areas where there is a risk of explosion.
- Do not connect the repeater to electrical outlets controlled by wall switches or automatic timers; avoid interference sources.

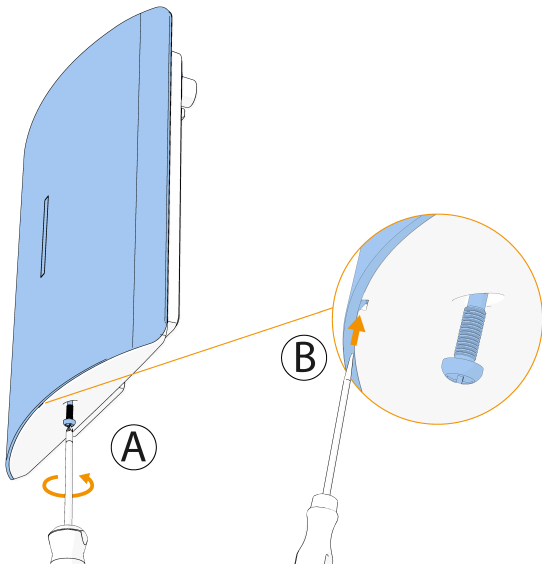
For best detection, install in a location that has the following requirements:

- A location where good communication with the control panel is assured. Good communication is indicated by blinking yellow LED.
- As high as possible above the floor.

Connecting the DC cable and inserting the battery

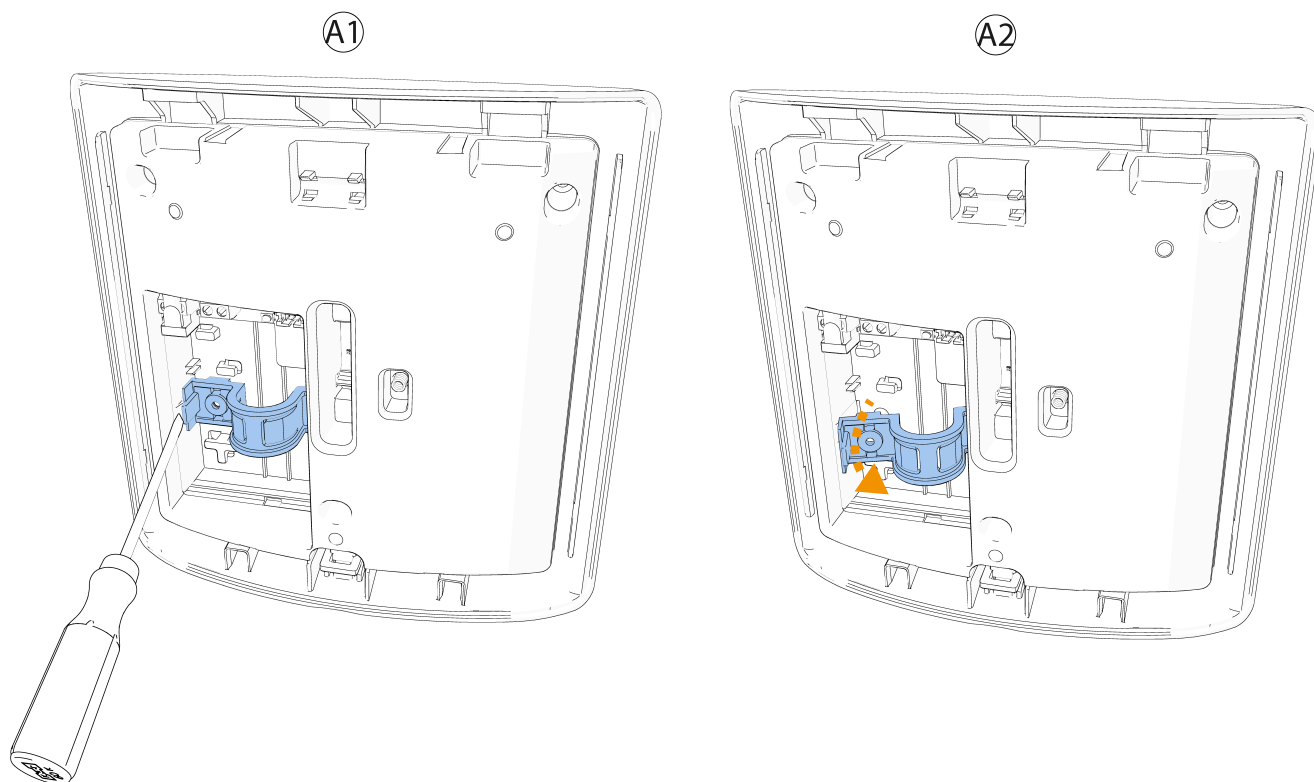
1. To open the device cover, use a screwdriver to loosen the cover screw. To separate the base from the cover, push the screwdriver into the groove between the base and the cover. See [Figure 2](#).

Figure 2: Device cover removal



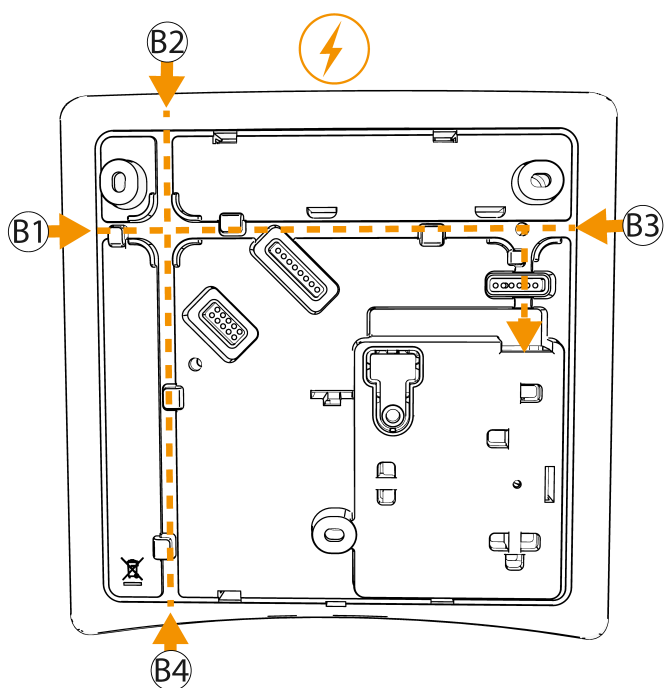
2. Detach the screw from the battery holder. See the following figure.

Figure 3: Detaching the screw from the battery holder



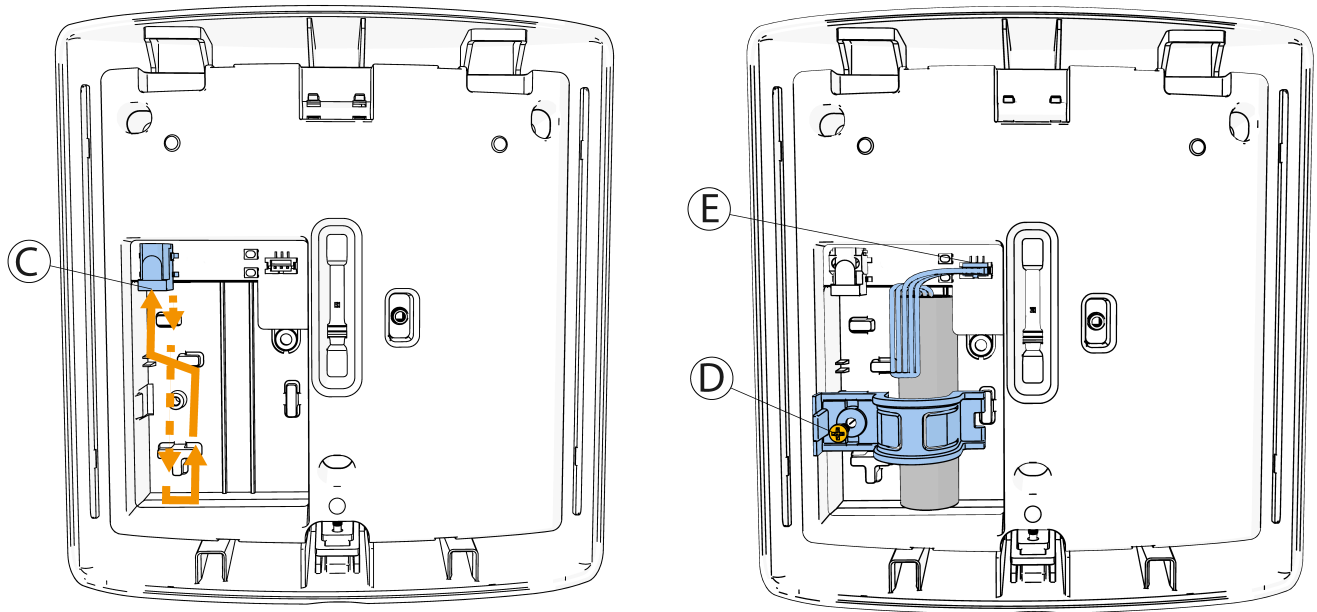
3. To connect the DC cable to the device, choose the most suitable option for wiring DC cable on the back side of the repeater. See B in the following figure.

Figure 4: Connecting the DC cable and inserting the battery



4. Place the DC cable inside the cover. See C in the following figure.

Figure 5: Placing the DC cable inside the cover



5. Insert the battery and connect to the cable connector. See E in the previous figure.
6. Put the battery holder in place, verify that the DC cable is under the holder, and connect the screw. See D in the previous figure.
7. Connect the DC cable to the DC jack. See C in the previous figure.

Enrolling the device

1. Refer to the control panel installation manual for the complete set of enrollment instructions and testing procedures.
2. From the **Installation** menu, select **Devices > Security Sensors > Auto Learn Sensor** to add a new device.
3. Verify that the DC cable is connected to the device. See [Figure 4 C](#). There are 3 options for auto enroll as follows:
 - a. Connect the repeater power supply to the socket in the wall.
 - b. Close the front tamper. See [Figure 1 E](#).
 - c. Press on the enroll button until the yellow LED light turns on. When LED turns on, release the button.
4. If requested, enter the PIN code printed on the device label.
5. To manually enroll the device:
 - a. Scan the QR Code on the device box, using the IQ4 camera or IQ installer if available, or see step b.
 - b. Manually enter the device ID, printed on the product label, in the format 431-XXXX.

❗ **Note:** If the device has been powered up for more than 48 hours it will be identified by the system only after the device has been reset.

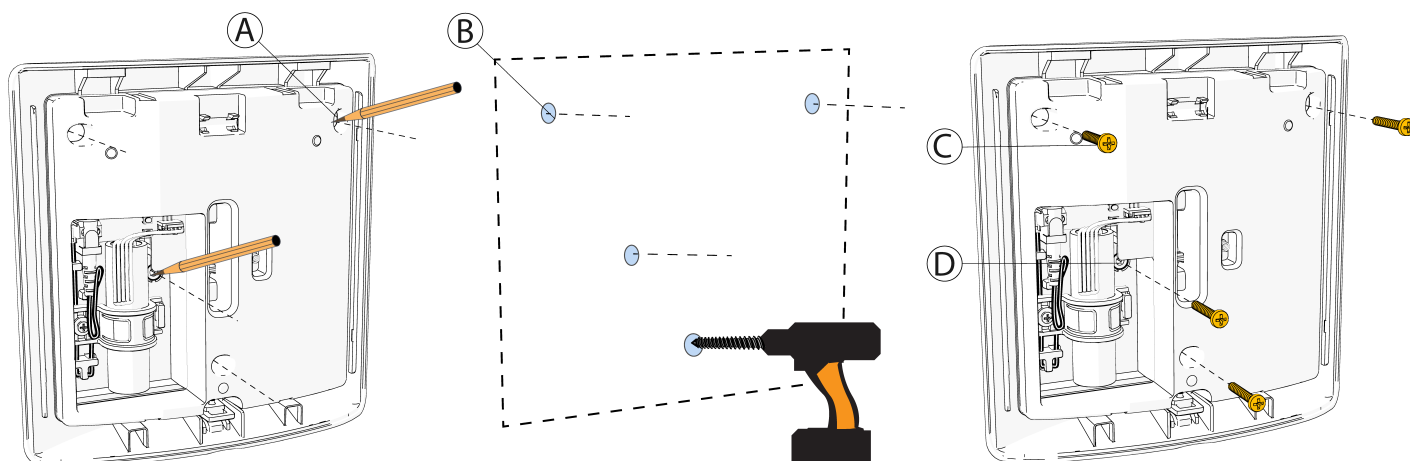
The PGPx920 is enrolled with device ID 431-XXXX. In fall back mode it enrolls as PGx920 with device ID 430-XXXX.
6. Configure any device parameters that are required.
7. Mount and test the device. See [Local diagnostics test](#) for information on testing the device.

Configuring the device parameters

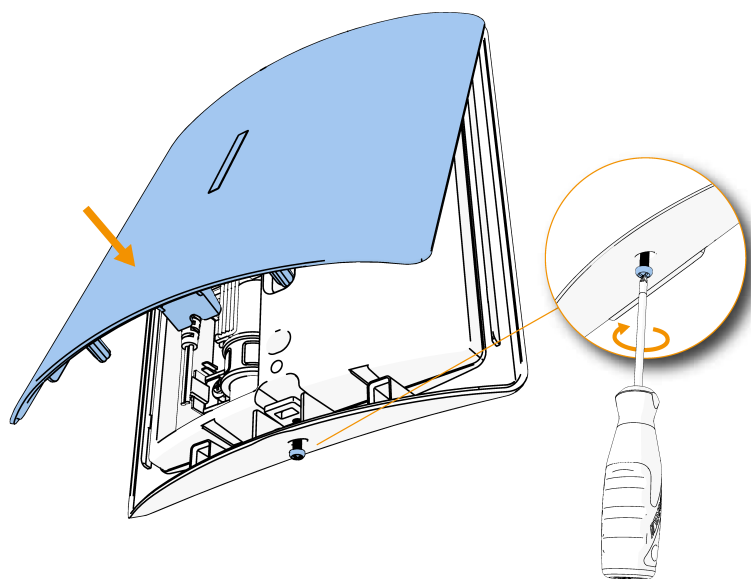
- Enter the **DEVICE SETTINGS** menu and select the required configuration.

Mounting the device using screws

- ❗ **Note:** Make sure to fasten the break-away segment to the wall. If the device is forcibly removed from the wall, this segment will break away from the base, causing the tamper switch to open.
1. Remove the device cover. See [Figure 2](#).
 2. Line up the device base with the wall and mark the screw hole locations with a pencil. See A in the following figure.
 3. Use a drill to prepare the screw locations on the wall. See B in the following figure.
 4. Screw the device base to the wall. Ensure the device is correctly orientated. See C and D in the following figure.

Figure 6: Device screw installation

5. Clip the cover on the device base and tighten the cover screw.

Figure 7: Closing the device cover

Replacing the battery

⚠ CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the manufacturer's instructions and according to local rules and regulations.

1. Disconnect the power supply from the AC outlet.
2. Remove the device cover. See [Figure 2](#).
3. Disconnect the battery cable. See A in the following figure.
4. Unscrew the battery holder. See B in the following figure.
5. Remove the battery. See C in the following figure.
6. Insert the new battery and connect the battery cable. See D in the following figure.
7. Screw the battery holder into place. See E in the following figure.
8. Close the device cover and fasten the cover screw. See [Figure 7](#).
9. Connect the power supply to the AC outlet.

① **Note:** After restoring a low battery or AC failure, the system may take up to 5 minutes to clear the trouble.

Local diagnostics test

After power-up or closing the cover, the device automatically enters Test Mode for 15 minutes. To manually enter the devices into Test Mode refer to the Control Panel Installer Guide.

1. Before you start the test, remove the device cover from the base. See [Figure 2](#).
2. Press the test button once and then release it. The red LED, and then the green LED, switch on and then off in turn, indicating that the device has passed local diagnostics test.
3. After 15 seconds the LED blinks three times. The following table indicates received signal strength indication.

Table 1: Signal strength indication

LED response	Reception
Green LED blinks	Strong
Yellow LED blinks	Good
Red LED blinks	Poor
No blinks	No communication

- **Important:** Reliable reception must be assured. Therefore, poor signal strength is not acceptable. If you receive a poor signal from the device, relocate it and re-test until a good or strong signal strength is received.
- ① **Note:** It is recommended to have a strong signal strength and you must verify the signal strength using the control panel's diagnostic test. For detailed Diagnostics Test instructions, refer to the control panel installer guide.
- ① **Note:** For UL/ULC installations, only strong signal levels are acceptable.

Specifications

Table 2: Specifications

Frequency Band	912 to 919 MHz
Communication Protocol	PowerG
Power Supply	100-240 VAC to 6V/1A DC For UL Listed product, 120 VAC, 60 Hz. Sure-Power type SW-060100A.
Battery Type	Rechargeable. 3.6 V 2200 mAh Li-ion Q-LITE type ICR18650. For UL Listed product, Q-LITE type ICR18650.
Backup Battery Duration	At least 48 hours, for UL listed product 24 hours
Operating Temperature	0 °C (32 °F) to 49 °C (120 °F)
Storage Temperature	-20°C (-4°F) to 60°C (140°F)
Relative Humidity	Up to 93% non-condensing
Dimensions (LxWxD)	180 mm x 180 mm x 48 mm (7.1 in. x 7.1 in. x 1.9 in.)
Weight (including battery)	434 g (15 oz)
Color	White

Compliance with standards

The PGPx920 complies with the following standards:

PGP9920	FCC (912 to 919 MHz): 47CFR part 15.247 ISED (912 to 919 MHz): RSS-247 UL/ULC: UL 2610, UL 1637, UL 1023, UL 985, ULC-S545, ULC-S304
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FCC and ISED Canada Compliance Statement

This device complies with FCC Rules Part 15 and with ISED license-exempt RSS standard(s). Operation is subject to two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference that may be received or that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

To comply with FCC Section 1.1310 for human exposure to radio frequency electromagnetic fields and IC requirements, implement the following instruction:

A distance of at least 20cm. between the equipment and all persons should be maintained during the operation of the equipment.

Le dispositif doit être placé à une distance d'au moins 20 cm à partir de toutes les personnes au cours de son fonctionnement normal. Les antennes utilisées pour ce produit ne doivent pas être situées ou exploitées conjointement avec une autre antenne ou transmetteur.

- ① **Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

- ⚠ **WARNING:** Changes or modifications to this equipment not expressly approved by the party responsible for compliance (Tyco Safety Products Canada Ltd.) could void the user's authority to operate the equipment.



UL/ULC notes

The PGP9920 has been listed by UL for commercial and residential burglary applications and by ULC for residential burglary applications. For UL/ ULC installations use this device only in conjunction with compatible DSC/Tyco wireless receivers: HSM2HOST9, HS2LCDRF(P)9, HS21CNRF(P) 9, HS2LCDRFPRO9, PG9920, IQ Pro, IQ Pro P, and Qolsys IQPanel2, IQHub, IQPanel4, IQ4 Hub. After installation, verify the product functionality in conjunction with the compatible receiver used.

Safety Instructions

Read the safety information before you install the equipment.

The repeater shall be installed and used within an environment that provides the pollution degree max 2 and over voltages category II in non-hazardous locations, indoor only. The equipment is designed to be installed by SERVICE PERSONS only; (SERVICE PERSON is defined as a person having the appropriate technical training and experience necessary to be aware of hazards to which that person may be exposed in performing a task and of measures to minimize the risks to that person or other persons).

The repeater is to be installed in an indoor dry location. Exposure to weather or corrosive conditions may damage the unit.

The PGPx920 is direct plug in powered from the mains. The enclosure must be secured to the building structure before operation. Use Only the Power Supply supplied with this equipment or defined by manufacturer. Use of unauthorized power supplies may damage the repeater.

Disclaimer: Please be advised that the PGPx920 may be sold without a power supply due to some standardization rules. To allow for the proper functioning of the product, you must purchase a power supply with the following specifications.

- Input: 100 to 240 VAC
- Output: 6V/1A DC Output
- AC: The AC socket or outlet powering the equipment should be easily accessible.

- ⚠ WARNING:** This equipment has no mains on/off switch. The plug of the direct plug-in power supply is intended to serve as the disconnecting device if the equipment must be quickly disconnected. It is imperative that access to the mains plug and associated mains socket/outlet, is never obstructed. Ensure that Cables are positioned so that accidents cannot occur. Connected Cables must not be subject to excessive mechanical strain.

W.E.E Product recycling declaration



For information regarding the recycling of this product you must contact the company from which you originally purchased it. If you are discarding this product and not returning it for repair then you must ensure that it is returned as identified by your supplier. This product is not to be thrown away with everyday waste.
Directive 2012/19/EU Waste Electrical and Electronic Equipment.

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Digital Security Controls warrants that for a period of 12 months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, Digital Security Controls shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Digital Security Controls such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

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