



## tyco PG9920 PowerG Wireless Repeater Instruction Manual

[Home](#) » [tyco](#) » tyco PG9920 PowerG Wireless Repeater Instruction Manual 



D-304683

PG9920/PG8920/PG4920

**PowerG Wireless Repeater Installation  
Instructions**

### Contents

- [1 Operation](#)
- [2 Device Setup](#)
- [3 Legend](#)
- [4 Mounting the Device](#)
- [5 Specifications](#)
- [6 COMPATIBLE RECEIVERS](#)
- [7 Limited Warranty](#)
- [8 Documents / Resources](#)
  - [8.1 References](#)
- [9 Related Posts](#)

## Operation

The PowerG Series Wireless Repeater relays digital data between wireless PowerG control 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.

### Service Messages

The following service messages can be transmitted by the repeater to the system:

- AC fail

- Tamper
- Low Battery
- Supervision
- End of life

## Device Setup

- The installer shall instruct the end user regarding the precautions that shall be considered during the use of the equipment
- Do NOT locate this product where persons will walk on the secondary circuit cable(s).
- Do NOT use extension cords to plug in the Power Supply of this equipment.
- AVOID setting up the equipment near heaters, air conditioners, ventilators, and/or refrigerators.
- Do NOT connect the this equipment to electrical outlets on the same circuit as large appliances.
- Do NOT select a place that exposes this equipment to direct sunlight, excessive heat, moisture, vapors, chemicals or dust.
- Do NOT install this equipment near water. (e.g., bathtub, wash bowl, kitchen/laundry sink, in a wet basement, near a swimming pool, etc.).
- Do NOT install this equipment and its accessories in areas where there is a risk of explosion.
- Do NOT connect this equipment to electrical outlets controlled by wall switches or automatic timers; avoid interference sources.

## IMPORTANT

This equipment, Wireless Repeater Model(s) PGx920 shall be installed and used within an environment that provides the pollution degree max 2 and overvoltages category II NON HAZARDOUS LOCATIONS, indoor only. The equipment is FIXED and DIRECT PLUG IN powered from the mains; it is designed to be installed by Service Persons only; The enclosure must be secured to the building structure before operation. It is the end-user and/or installer's responsibility to ensure that the disposal of the used batteries (battery pack) is made according to the waste recovery and recycling regulations applicable to the intended market. Use only the Power Supply provided with this equipment. Use of unauthorized power supplies may damage the repeater! The AC Socket/Outlet powering the equipment shall be located near the equipment and shall be easily accessible.

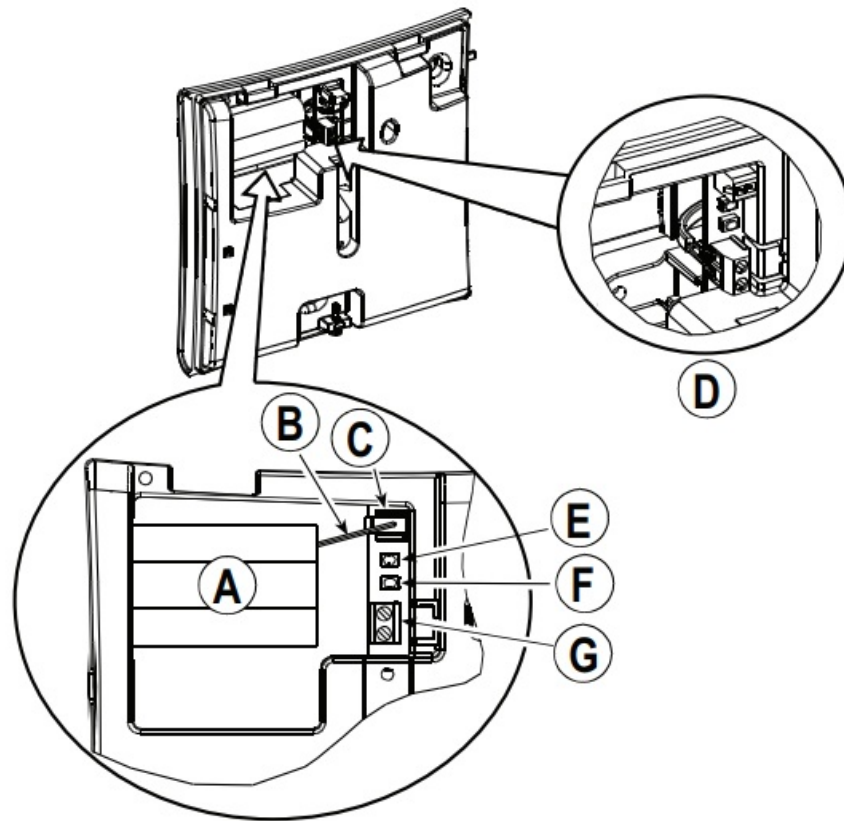
## WARNING

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.

**Note:** A global upload of all wireless programming via DLS is recommended before a system default to ensure continued operation of all wireless devices. Download the wireless programming once the system default is complete.



## Legend



- A. Battery
- B. Battery cable
- C. Battery pack connector
- D. Wires to AC Connector terminal block
- E. Self-Test button
- F. Enroll button
- G. AC connector terminal block 9VAC
- H. For back tamper screw

## Install the Battery

1. Loosen cover screw and remove the cover.
2. Insert battery pack and securely insert the battery cable (B) into the battery connector (C).

**Note:** When manually programming wireless devices, a device powered up more than 48 hours it cannot be enrolled into the system until the device has been tampered and restored. When programming the panel using the Quick Enroll procedure follow the steps detailed in Enroll the Device into the System. Note: After restoring a low battery or AC power trouble the system may take up to 5 minutes to clear the trouble.

## Enroll the Device into the System

Refer to the PowerSeries Neo Host Installation Manual or iotega Reference Manual for the enrollment procedure.

## Location Selection

Install the repeater in a location:

- where GOOD communication (Orange LED blinks) with the target receiver is assured.
- near an electrical outlet.
- where other transmitters are deployed within the repeater's coverage area.
- as high as possible above the floor and well away from things that may reduce the communication range such

as metal chimneys, large metal cabinets, metal doors and reinforced concrete walls.

### Placement Testing

Before permanently mounting any wireless device, temporarily mount the device and perform a placement test.

1. Before testing, separate the base from the cover.
2. Press the Self-Test button once and release it. The red LED and then the green LED will switch ON and then OFF to indicate that the repeater is now fully operational. After 2 seconds the LED blinks 3 times indicating the signal strength.

LED Response	Signal Strength
Green LED blinks	Strong
Orange LED blinks	Good
Red LED blinks	Poor
No blinks	No communication

**IMPORTANT!** Only GOOD or STRONG signal strengths are acceptable. If you receive a POOR signal from the device, relocate it and re-test until a GOOD or STRONG signal is received.

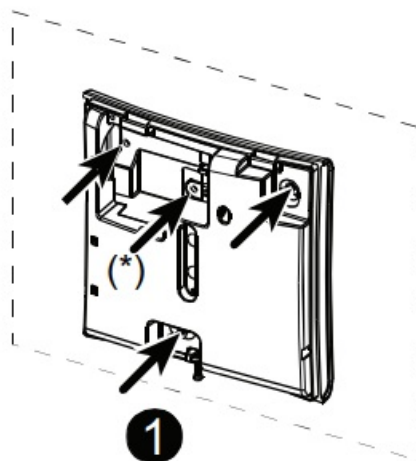
**Note:** For UL/ULC installations, only STRONG signal levels are acceptable. After installation verify the product functionality in conjunction with the compatible receivers.

**Note:** For detailed placement instructions refer to the control panel Reference Manual.

### Mounting the Device

1. Mark for drilling.
2. Drill 4 holes.
3. Fasten with 4 supplied screws.

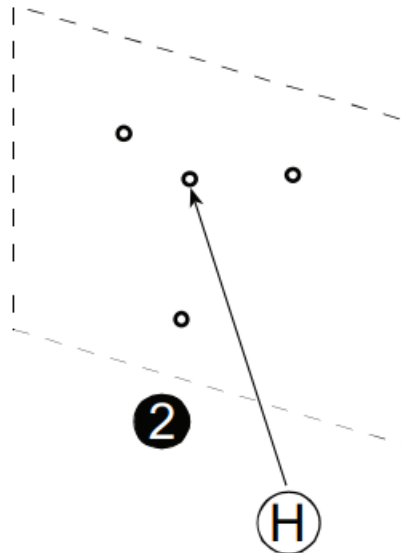
**Attention!** For Europe, the transformer has to be CE compliant with the applicable requirements of EN60950-1 and power limited.



### Specifications

Frequency Band (MHz): CE Listed PG4920: 433MHz; CE/EN listed PG8920: 868MHz; FCC/IC/UL/ULC listed PG9920: 912-919MHz

Communication Protocol: PowerG Supervision: Signaling at 128 s intervals AC Power Supply: AC to AC adapter



120 VAC, 60 Hz / 9 VAC, 0.35 A min. (in the U.S.A.) 230 VAC, 50 Hz / 9 VAC, 0.35 A min.

Backup Battery: 4.8-Volt 1300 mAh NiMH rechargeable

Low Battery Threshold: 4.8 V

Battery Supervision: Status message every 24 h.

Power Supply: Type A Time to charge: 80% (~ 12 Hrs) Low voltage alarm: ~ 4.8V

Nominal Current Drain (when using external AC power): 100mA

Battery Backup Duration (with fully charged 1300 mAh battery): 48 hours

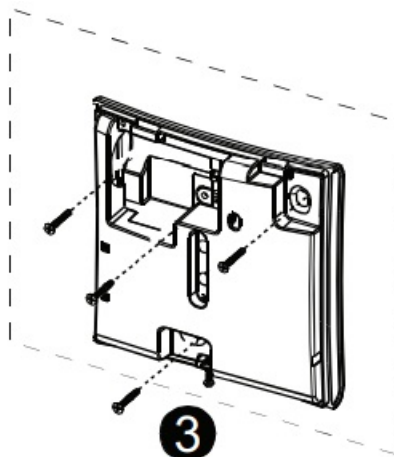
LED indicator: Green LED lights when AC power on

Temperature range: – 10°C to +55°C (UL/ULC only verified the range 0°C to +49°C)

Relative Humidity: up to max. 93%RH, non-condensing

Dimensions (LxWxD): 161x161x50mm (6-7/16 x 6-7/16 x 1-3/4 in)

Weight (including battery): 470g (16.5 oz.) 3



## COMPATIBLE RECEIVERS

This device can be used with DSC panels and receivers that use PowerG technology.

For UL/ULC installations use these device only in conjunction with compatible DSC wireless receivers: WS900-19, WS900-29, HSM2HOST9, HS2LCDRF(P)9, HS2ICNRF(P)9 and PG9920.

After installation verify the product functionality in conjunction with the compatible receiver used.

### UL/ULC Notes

Only models PG9920 operating in the frequency band 912-919MHz are UL/ULC listed. The PG9920 has been listed by UL for commercial burglary and residential fire/burglary applications and by ULC for residential burglary

applications in accordance with the requirements in the Standards UL1610, UL1023, UL985, ULC/ORD-C1023, ULC-S545.



The PG8920 is certified by Applica Test & Certification AS to the following standards: EN50131-3, EN50131-5-3, EN50131-1 GRADE 2, CLASS II, EN50131-6 Type A. According to EN 50131-1, this equipment can be applied in installed systems up to and including Security Grade 2, Environmental Class II. UK: The PG8920 is suitable for use in systems installed to conform to PD6662 at Grade 2 and environmental class 2 BS8243.

#### **SIMPLIFIED EU DECLARATION OF CONFORMITY**

Hereby, Tyco Safety Products Canada Ltd declares that the radio equipment type is in compliance with Directive 2014/53/EU. The full text of the EU declarations of conformity for the models mentioned below are available at the following internet addresses:

PG4920- <http://dsc.com/pdf/1401008>

PG8920 – <http://dsc.com/pdf/1401031>

#### **Frequency Band / Maximum Power**

g1 433.04MHz – 434.79MHz/10mW

h1.4 868.0MHz – 868.6MHz/10mW

h1.5 868.7MHz – 869.2MHz/10mW

European single point of contact: Tyco Safety Products, Voltaweg 20, 6101 XK Echt, Netherlands

#### **FCC COMPLIANCE STATEMENT WARNING!**

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device 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 residential installations. 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 and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one that supplies power to the receiver.
- Consult the dealer or an experienced radio/TV technician. This equipment complies with FCC and IC RF radiation exposure limits set forth for an uncontrolled environment.

This device complies with FCC Rules Part 15 and with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following 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.



#### **Limited Warranty**

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 fulfilment 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. The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied 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.

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PG9920 PowerG Wireless Repeater, PG9920, PowerG Wireless Repeater, Wireless Repeater, Repeater

## References

- [User Manual](#)

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