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Door and Window Sensors

Installation Guide

Installation Support:

(877) 998-1457

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PG9303
PG9303BR



D-307447

tyco

PGx303 installation instructions

Supervised vanishing magnetic contact

Overview

The PGx303 is a thin, ultra long-life PowerG magnetic contact device that is compatible with DSC wireless receivers. The wireless device includes a built-in reed switch that opens a circuit when the magnet is moved from its normal position.

NOTE: The x in the product name PGx303 can be replaced by one of the following numbers: 4, 8, 9, 4 refers to the frequency 433 MHz, 8 refers to 868 MHz and 9 refers to 912 MHz - 919 MHz.

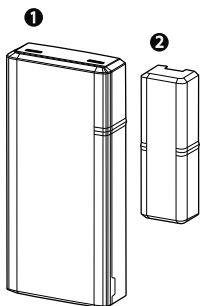


Figure 1:
PGx303
1: Device
2: Magnet

- Two-way PowerG communication with the control panel
- Front and back cover tamper detection
- LED light signal strength indication during installation
- Discreet transmission of supervision message
- PowerG two-way frequency hopping spread spectrum time-division multiple access (FHSS-TDMA) technology
- Low battery indication

Installation

CAUTION! Service personnel only may install this equipment. Place this device in non-hazardous indoor locations only.

NOTES:

To comply with FCC and IC 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.

Mounting the device (quick installation)

NOTE: Do not use this method for UL installations as UL certified devices must be mechanically secured.

1. Peel the release liners off the two strips of double-sided adhesive tape and attach the tape to the back of the device and the magnet. See Figure 2.
2. Place the device on the frame of a window or door and place the magnet on the moving surface

of the door or window itself, directed according to the location marks. See Figure 3.

NOTE: See *Typical reed switch positions* for more information on alignment.

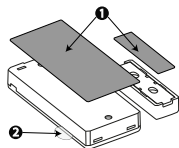


Figure 2: Quick installation
1: Double-sided adhesive tape
2: Enrollment / battery tab

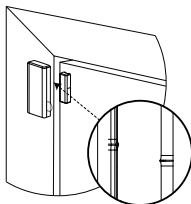


Figure 3: Device and magnet position on door and door frame

Mounting the device (screw installation)

To mount the device with screws, complete the following steps:

1. Insert a coin in the slot and twist to remove the cover. See Figure 4.1. If a coin is not available, insert a 4 mm flat screwdriver into each slot of the plastic cover and twist to open each side. See Figure 4.2.
2. Screw the device base onto the door frame. See Figure 5.
3. Screw the magnet base on to the door, aligning it with the line on the device. See Figure 3.
4. Clip the covers on to the device and magnet base (see Figure 7).

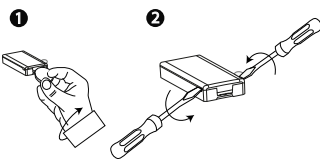


Figure 4: Device cover removal

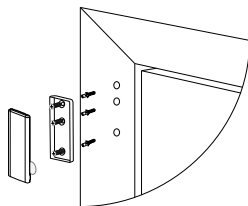


Figure 5: Device screw installation

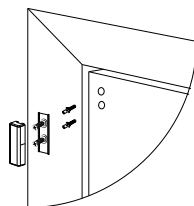


Figure 6: Magnet screw installation

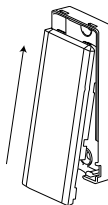


Figure 7: Closing the device cover

Enrolling the device

To enroll the device, complete the following steps:

NOTES:

Refer to the panel installer guide and follow the procedure under the 02:ZONES/DEVICES option of the installer menu.

For UL/ULC listed installations use only in conjunction with UL/ULC listed control panels.

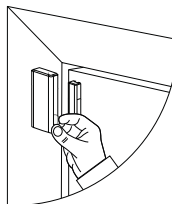


Figure 8: Battery/enrollment tab

Refer to the panel installation manual for the enrollment procedure. A general description of the procedure is provided below:

1. To ensure that the proper steps are used, refer to the installation manual for the alarm system that the device is being enrolled on.
2. Enter the device enrollment option through the specified method and select the appropriate option to add the new device.
3. Enroll the device by either inserting the battery to power on the device until the enrollment is detected, or by entering the device ID.
4. Select the desired zone number.
5. Configure any device parameters that are required.
6. Mount and test the detector. See walk testing for information on testing the device. In addition, see the alarm systems installation manual that the device is enrolled on for other test procedures that are required.

If the detector is already enrolled, you can configure the detector parameters by programming the system, see the alarm systems installation manual for more information about device parameters.

NOTE: When enrolling a PGx303 detector to WP panels with version 19.4 or lower, the detector is enrolled

as PGx302 magnetic contact detector, ID:100-XXXX, and labeled **Contact** in the panel.

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.

WARNING! This product contains a coin battery. If it is swallowed, it can cause severe internal burns in just 2 hours and can lead to death. Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

To remove the battery, complete the following steps:

1. Remove the cover. See Figure 4.
2. Wedge a flat head screwdriver under the battery. See Figure 9.1.
3. Twist the screwdriver using the base as a lever to remove the battery.

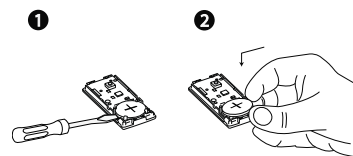


Figure 9: Battery removal and insertion

To insert the battery, complete the following steps:

1. Insert the battery at an angle while observing battery polarity. See Figure 9.2.
2. Press down on the battery until it fits into place.

Typical reed switch positions

The following table displays the range coverage directions of the PGx303.

Wood		Supports	Iron	
Opening	Closing	Direction	Opening	Closing
>22 mm (0.87 in.)	≤ 19 mm (0.75 in.)	X	> 9 mm (0.35 in.)	< 5 mm (0.20 in.)
> 16 mm (0.63 in.)	≤ 14 mm (0.55 in.)	Y	> 12 mm (0.47 in.)	< 10 mm (0.40 in.)
> 27 mm (1.06 in.)	≤ 25 mm (0.98 in.)	Z	> 18 mm (0.71 in.)	< 15 mm (0.60 in.)

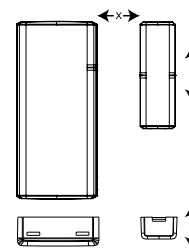


Figure 10: Range coverage directions

Local diagnostics test

Before testing, separate the cover from the base (see Figure 4), then complete the following steps:

1. Close the cover to return the tamper switch to its normal (undisturbed) position.
2. Momentarily open the door or window and verify the red LED blinks, indicating detection.
3. After two seconds, one of the LEDs blinks three times.

Table 2 displays received 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 detector, re-locate it and re-test until a strong signal strength is received (in regions requiring UL-compliant installation, only strong signal strength is permitted).

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.

Specifications

WIRELESS

Frequency: 433, 868, 915 (in accordance with the prevailing frequency of your region).
Note: Only devices in frequency band 912 MHz - 919 MHz are UL/ULC listed
Maximum Tx Power: +14 dBm radiated @ 868 MHz; +10 dBm radiated @ 433 MHz
Modulation: GFSK
Antenna: Built-in inverted-F antenna
Communication protocol: PowerG
Supervision: Signaling at 256 second intervals

ELECTRICAL

Battery Type: 3 V Lithium CR2450 Panasonic battery only
Battery Life: 6 years with typical use at room temperature 25°C (77°F)
NOTE: Not verified by UL
Low Battery Threshold: 2 V at room temperature 25°C (77°F)

ENVIRONMENTAL

Operating temperature: -10°C (14°F) to 55°C (131°F).
UL verified range: 0°C (32°F) to 49°C (120°F) only
Storage Temperature: -20°C to 70°C (-4°F to 158°F)
Relative Humidity (RH): Up to 95% non-condensing, UL verified up to a maximum of 85% RH only

PHYSICAL

Size (LxWxD): 67 mm x 31 mm x 11 mm (2.6 in. x 1.2 in. x 0.4 in.)
Weight (with battery): 20 g (0.71 oz)
Color: White or Brown

UL/ULC Notes

Only model PG9303 operating in the frequency band 912-919MHz is UL/cUL listed. The PG9303 has been listed by UL/cUL for commercial and residential burglary applications in accordance with the requirements in the Standards UL 634 and UL/ORD-C634 for contacts and switches. For UL/ULC installations use these device only in conjunction with compatible DSC wireless receivers: HSM2HOST9, HS2LCDRF(P)9, HS2ICNRR(P)9, PG9920, WS900-19, and WS900-29.

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



Europe: CE/EN (EN50131-2-6 GRADE 2, CLASS II, EN50131-6 Type C) listed PG8303: 868 MHz PG4303: 433 MHz. 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 PG8303 is suitable for use in systems installed to conform to PD6662 at Grade 2 and environmental class II BSR243. The Power G peripheral devices have two-way communication functionality, providing additional benefits as described in the technical brochure. This functionality has not been tested to comply with the respective technical requirements and should therefore be considered outside the scope of the product's certification.

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 declaration of conformity is available at the following internet address: PG4303: <http://dsc.com/pdf/1809003> PG8303: <http://dsc.com/pdf/1809004> Frequency band Maximum power

Frequency	Max power
868.0 MHz - 868.6 MHz	+14 dBm
868.7 MHz - 869.2 MHz	+14 dBm
433.04 MHz - 434.79 MHz	+10 dBm

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.

FCC ID: F5318PG9303

Industry Canada Statement

This equipment complies with FCC and ISED Canada RF radiation exposure limits set forth for an uncontrolled environment. This device complies with FCC Rules Part 15 and with ISED 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.

Le présent appareil est conforme aux CNR d'ISED 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.

IC: I60A-PG9303

The term IC before the radio certification number signifies that the Industry Canada technical specifications were met. This Class B digital apparatus complies with Canadian ICES-003. This device complies with RSS-247 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada. Ce dispositif satisfait aux exigences d'Industrie Canada, prescrites dans le document CNR-247. son utilisation est autorisée seulement aux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Limited Warranty

Digital Security Controls (DSC) 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, DSC 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 DSC 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 DSC. 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. In no event shall DSC be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product. WARNING: DSC recommends that the entire system be completely tested on a regular basis.

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