Universal Wireless Transmitters

Installation Instructions

1. INTRODUCTION

The WT-100 and WT-100A are general purpose, battery powered single-input transmitters for use with Normally Open (N.O.) and Normally Closed (N.C.) sensors and inertial vibration detectors.

A reed switch built into both units can be used with a magnet (not supplied) to protect a door or a window. An on-board tamper switch triggers a tamper alert (Channel 2) if the front cover is removed from the base.

A special timing circuit saves the 9-volt battery power by limiting the transmitting time. When the WT-100 is triggered, it transmits for about 2 seconds, then inhibits itself for approximately one minute. If an input remains disturbed, the WT-100 will keep transmitting signals for a 2-second duration each minute, until the input reverts to the undisturbed state. The WT-100A is a single-shot (non-repeating) model that transmits only once upon each input trigger.

The LED lights during the transmission period. A special circuit continuously monitors the battery voltage. If this drops below about 7.5 Volts, the transmitter automatically transmits a low battery alert signal for 1-2 seconds, to activate a buzzer in the target receiver. Low battery signals are repeated at one-minute intervals for a few days, depending on the remaining amount of battery energy. The LED lights during each transmission, identifying the unit transmitting the low battery signal.

2. SPECIFICATIONS

Frequency (MHz): 315, 404, 418, 433.92 or other frequencies according to local requirements
System Code: 8-bit, 256 combinations, pulse width modulation
Channel Codes: 4 codes, DIP-switch selectable
Transmission Cycle: 2 seconds ON, 1 minute OFF, indicated by LED.
Input Circuit: N.C. / N.O. (N.C. input must be shorted by the N.C. jumper if not used).
Input Response: Adjustable, 5 to 30 ms
Power Supply: 9 VDC Alkaline or Lithium battery
Current Consumption: 10 µA standby, 10 mA in operation
Battery Supervision: Automatic transmission of low battery alert code, which activates a buzzer in the receiver.
Compliance with Standards: Meets FCC Part 15, MPT 1349 and Directive 1999/5/EC.
Operating Temperature: 0°C to 49°C (32°F to 120°F).
Dimensions: 110 x 63 x 25 mm (4-5/16 x 2-1/2 x 1 in.).
Weight: 68 g (2.4 oz)

3. INSTALLATION

3.1 Mounting

Open the case by removing the screw from the front cover. Mount the base with the printed circuit board in the selected location, using the mounting knockouts. Be sure to mount the unit with the antenna wire hanging down. Route the wiring through any wiring knockout in the base.

3.2 System Code Selection

The on-board CODE selector consists of an 8-position DIP switch with keys marked from 1 to 8 (see Fig. 3). Each key is set to either ON or OFF to create a unique digital code (256 possible combinations). This code serves as a system code or a password between the transmitter and the target receiver. Select the desired system code by shifting the keys with a ball-point pen or a small screwdriver. All wireless units used in the system and the target receiver must be programmed with the same digital code.

Caution: The factory test code combination 2, 4, 5, 6, 7 ON / 1, 3, 8 OFF must not be used. Also avoid codes which are often used: all keys ON, all keys OFF or alternating ON/OFF settings.

3.3 Channel Selection

Each transmitter can be set to transmit one of four different "channel codes". The channel code is added to the system code to activate a specific output in a multi-output receiver. Channel codes are very useful for zoning purposes (activating various types of zones of an alarm control panel).

The channel code selector consists of a 4-position DIP switch, with keys marked from 1 to 4. The code is selected by switching the corresponding key(s) to ON. You may select more than one channel code for simultaneous activation of several channel outputs at the receiver.

Note: Channel 2 code is transmitted automatically as a tamper alert whenever the front cover is removed.

Setting all four-channel keys to OFF will activate the buzzer at the receiver (same as low battery alert) and none of the receiver's channel outputs.

3.4 Input Sensitivity Adjustment

Input sensitivity for vibration detectors is adjusted with the SENS. potentiometer. The sensitivity is at maximum (response time about 5 ms) with the control knob rotated fully towards [+1] and at minimum (response time about 30 ms) with the control knob rotated fully towards [--]. If you are not using a vibration detector, set the control fully towards [--].

Figure 1. WT-100 and WT-100A

Figure 2. Front Cover Removal

Figure 3. Code Selector

Figure 4. Selecting Channel 2
3.5 Wiring

Normally closed sensors and inertial vibration detectors are wired in series between the terminals marked N.C. Note: If the N.C. input is not used, it must be shorted by installing a jumper on the N.C. terminal below the terminal block (Fig. 1).

3.6 Battery Installation

Note: Before installing the battery, use some masking tape to temporarily keep the tamper switch lever down. This will prevent the unit from continuously transmitting a tamper alert while the front cover is removed for testing.

Visonic Ltd. low current SRN-2000C/PC series PIR detectors may be powered from the 1st (+) and 2nd (–) terminals from the left. When using the same battery for the transmitter and the PIR detector, low-battery supervision is obtained for both units.

To use the reed switch, remove the reed switch jumper “J1” (located near the reed switch).

4. MISCELLANEOUS COMMENTS

4.1 Product Limitations

Visonic Ltd. wireless systems are very reliable and are tested to high standards. However, due to low transmitting power and limited range (required by FCC and other regulatory authorities), there are some limitations to be considered:

A. A receiver may be blocked by radio signals sent on or near its operating frequency, regardless of the digital code used.

B. A receiver responds to one transmitted signal at a time.

C. Wireless equipment should be tested regularly to determine whether there are sources of interference and to protect against faults.

4.2 Compliance with Standards

The 315 MHz model of this device contains RF module RFT-1A, which complies with Part 15 of the FCC Rules and RSS-210 of Industry and Science Canada. Operation is subject to these two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation.

The user is cautioned that changes or modifications to the unit, not expressly approved by Visonic Ltd., could void the user’s FCC or other authority to operate the equipment.


Frequency Allocations for Wireless Devices in European Countries:

- 433.92 MHz has no restriction in any EU member state.
- 418 MHz is allowed in the UK only.
- 315 MHz is not allowed in any EU member state.

WARRANTY

Visonic Ltd. and/or its subsidiaries and its affiliates (“the Manufacturer”) warrants its products hereinafter referred to as “the Product” or “Products.” to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use for a period of one year from the date of shipment by the Manufacturer. The Manufacturer’s obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. The Manufacturer shall not be responsible for dismantling and/or reinstallation charges.

This warranty does not apply in the following cases: improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the Manufacturer.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.

This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether direct, indirect, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

The Manufacturer does not represent that its Products may not be compromised and/or circumvented, or that it will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. The Manufacturer does not assume or warrant against any liability for any loss or damage caused directly or indirectly by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

Warranty: The user should follow the installation and operation instructions and other products tests the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electronic or electromagnetic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his/her safety and the protection of his/her property.