



Installation manual AT-308 4-channel wireless receiver 868MHz



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SPECIFICATIES

Models:	AT-308 PowerCode 868Mhz (art. code. 007045) AT-308 PG2/ PowerG 868Mhz (art. code. 007047)
Suitable for:	Visonic PowerCode 1-way 868MHz transmitters and detectors Visonic PowerG (PG2) 2-way 868MHz transmitters and detectors
RF MODULE	
Module:	superhetrodyne RF-receiver
Frequency:	868,95MHz (broadband)
DATA PROCESSING	
ID codes:	More than 16 million possible combinations
Length of transmission:	36 bits
MEMORY	up to 16 wireless transmitters / detectors
INPUT	ARM input for status alarm system (ARMED/DISARMED)
OUTPUT	
Relay:	4 pieces, max. 30VDC/1A
Open collector	3 pieces, max. 100mA
ELECTRICAL	
Power supply:	10-24VDC
Consumption:	Approx. 32mA
ENVIROMENTAL	
Working temperature:	0° C to 50° C
Dimensions (L x W x H):	108 x 165 x 38 mm

INTRODUCTION

The AT-308 is a universal 4-channel wireless receiver designed for receiving Visonic wireless (1-way) PowerCode 868MHz devices or Visonic wireless (2-way) PowerG 868MHz devices. The devices can be panic buttons, keyfobs or various wireless detectors. A total of 16 wireless devices can be enrolled into the AT-308 receiver.

The AT-308 receiver is equipped with 4 potential-free relay outputs and 3 open collector status outputs. The enrolled devices activate one of the four relay outputs when the devices transmits a wireless signal to the AT-308 receiver. The AT-308 PowerG (PG2) model also has an 'ARM' input which is used to indicate the status (ARMED / DISARMED) of a connected intrusion panel, this function ensures that connected PG2 motion sensors do not send a signal to the AT-308 receiver when the intrusion panel is disarmed and thus extending the lifetime of the battery.

The AT-308 has a universal design and can be used with a wide range of Visonic wireless PowerCode or PowerG 868Mhz devices. Due to this universal design the AT-308 is suitable for a variety of applications for example, the receiver can be linked to a nurse call system to activate a help call or linked to hard-wired inputs on an alarm system or alarm dialler to activate an alarm or transmit an alarm message to an ARC. By connecting various wireless devices, the AT-308 can be used for panic alarm, hold-up situations, burglary detection, fire detection, gas detection. The applications are endless.

If the AT-308 is used with wireless Visonic **detectors** (PIR, smoke detector, gas detector, water detector or vibration sensor), the relay output will pulse for approximately 2 seconds when the detector sends a wireless signal to the AT-308 receiver.

If the AT-308 is used with a Visonic wireless **magnetic contact**, the relay output will toggle as soon as the wireless magnetic contact is opened. The relay output remains toggled if the wireless magnetic contact is open, making the AT-308 ideal for door / window position signalling. As soon as the wireless magnetic contact is closed, the relay output will toggle back again.

Some Visonic wireless **magnetic contacts** are also equipped with an extra hardwired input. This hardwired input can **only be used with PowerCode 868MHz** magnetic contacts on the AT-308 PowerCode! This input must be enrolled as a separate device (contact) on the AT-308! The hardwired input of a PowerG (PG2) magnetic contact **CANNOT** be used! Regardless of the position of dipswitch 2 on dipswitch 1-6, the relay output only works as a toggle contact and not as a pulse contact.

If the AT-308 is used with a Visonic **panic button/keyfob** (MCT-132, MCT-134, MCT-234, PB102, KF-234 and KF-235), the relay output of the AT-308 can be toggled on and off with the "lock open" and "lock closed" buttons on the device. The other buttons have no function. From firmware V1.3, a visible / audible feedback on the PB-101/102 handheld transmitters has been added to indicate that the receiver has received the pressing of the button (s)

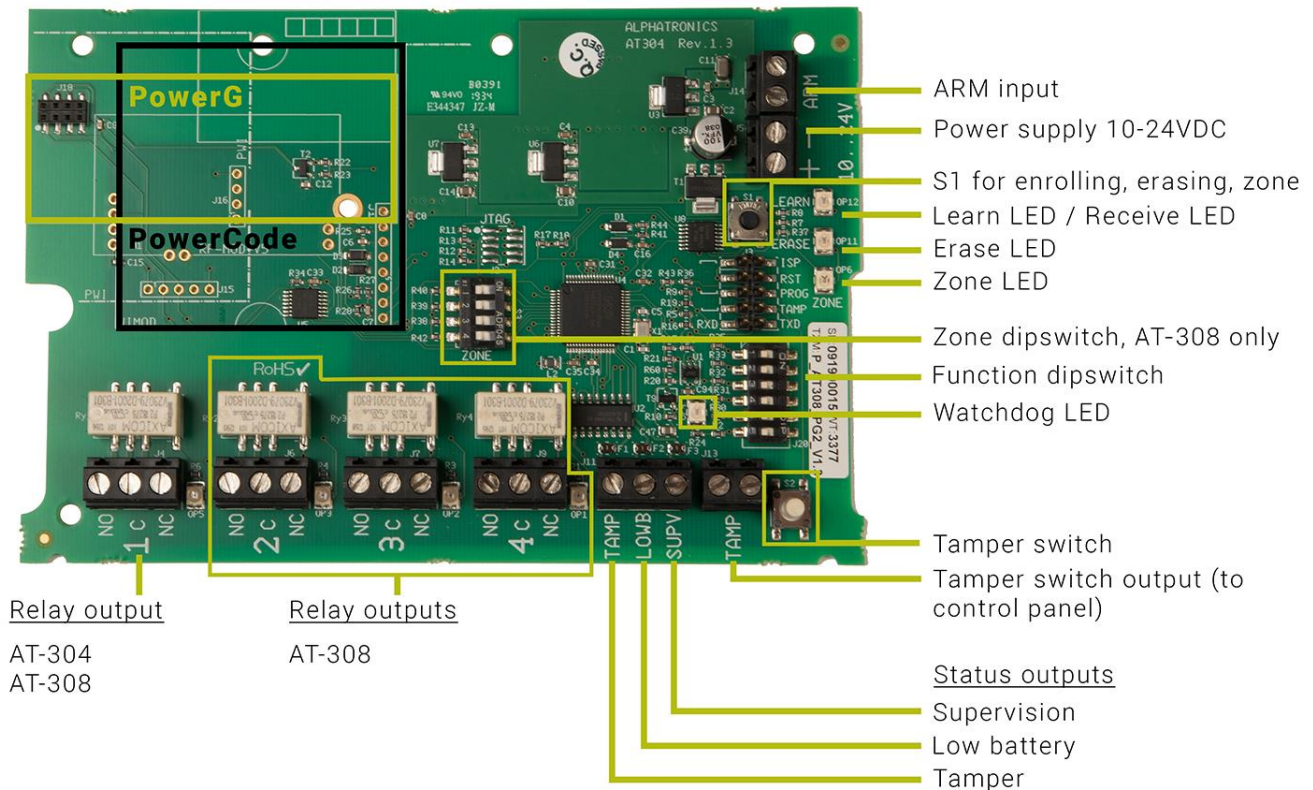
If the AT-308 is used with a Visonic **1-button panic button** (MCT-101, MCT-201WP, MCT-241, MCT-211, MCT-211RL, MCT-220, PB-101), the relay output will be activated when the user presses the button. Depending on the setting of dipswitch 2 the relay output will pulse for approximately 2 seconds or toggle.

If the AT-308 is used with a Visonic PowerCode **1-button transmitter including man-down** (MCT-241 MD), the relay output will be activated when the user presses the button. Depending on the setting of dipswitch 2 on dipswitch 1-6 the relay output is pulsed for approximately 2 seconds or toggled. The MCT-241 MD also features a fall detection (man down) function. To be able to use the fall detection function this signalling must be enrolled as a separate device on the AT-308. Fall detection of the MCT-241 MD activates the relay output on the AT-308. Regardless of the position of dipswitch 2 the relay output will always toggle. The output therefore remains activated if the person is lying on the floor and the transmitter is in a horizontal position. Only after the transmitter returns to the vertical position the relay output switches back again.

It is also possible to use a Visonic multi-button transmitters (MCT-102, MCT-104, PB-102) in combination with the AT-308 receiver. Depending on the setting of dipswitch 2 on dipswitch 1-6, the control of the relay output is a pulse for approximately 2 seconds or switched over (toggle).

CONNECTIONS

The AT-308 receiver is supplied in a synthetic casing and must be powered by an external 10-24VDC power supply. The PCB contains terminal connections for one relay output, 3 open collector status outputs, an "ARM" input, and the power supply.



AT-308 PCB equipped with Visonic PowerG 868Mhz receiver module and antenna.

ENROLLING TRANSMITTERS, KEYFOBS AND DETECTORS

For a transmitter, keyfob or detector to communicate with the AT-308 receiver, it must first be enrolled. A maximum of 16 wireless devices can be enrolled. **For each of the 4 relay (zone) outputs a maximum of 4 devices can be enrolled.**

- 1) Open the casing so that the print is visible.
- 2) No jumper should be placed over the pins on the PCB, not even over the TAMP pins!).
- 3) Set dipswitch 1 on dipswitch 1-6 to ON, the green LEARN (OP12) LED will start to flash slowly.
- 4) Select with dipswitch 1-4 the desired relay (zone) output to which the wireless device must be assigned during enrolment.
 - Dipswitch 1 set to ON = zone 1, Dipswitch 2 set to ON = zone 2, Dipswitch 3 set to ON = zone 3. Dipswitch 4 set to ON = zone 4.
- 5) By pressing the TAMP switch the desired memory location for the relay (zone) can now be selected.
 - The amount of times that the ZONE led flashes (1,2,3, of 4 times) indicates the memory location of the zone. If a memory location is already occupied the LEARN led will illuminate constantly if the location is free the LEARN led will flash.
- 6) Press the LEARN/erase button, the LEARN led will start flashing rapidly.
- 7) **PowerCode:** Press the button on the transmitter, the keyfob or the tamper switch on a detector. The device enrolls and the LEARN LED starts flashing slowly again.

PowerG: Follow the steps in the manual of the PowerG device for the correct enrolment procedure. For detectors, in most cases an "Enroll" button on the detector will have to be pressed until the LED on the detector lights up yellow. There are also detectors that enrol directly when the batteries are installed. For keyfobs you usually must press the * key until the LED on the keyfob lights up orange (amber). When the

device is enrolled, the LEARN (OP12) LED on the AT-308 will flash slowly again.

- 8) Press the TAMPER switch to go to the next memory location of the same relay (zone) output and repeat steps 6 and 7 to enroll the device into the relay (zone) output memory.
- 9) Repeat steps 4, 5, 6, 7 and 8 to enroll a new device to one of the other relay (zone) outputs.
- 10) When all transmitters and detectors have been enrolled, switch dipswitch 1 on dipswitch 1-6 back to OFF.

Enrolled transmitters and detectors are stored in the AT-308's internal memory and are retained in the AT-308's memory even in the event of a power failure.

ERASING ONE (OR MORE) TRANSMITTERS KEYFOBS AND DETECTORS

Indien één of enkele handzenders, keyfobs of detectoren gewist dienen te worden, voert u onderstaande handelingen uit:

- 1) Open the casing so that the print is visible.
- 2) Set dipswitch 3 on dipswitch 1-6 to ON, the ERASE and ZONE LED will now illuminate.
- 3) Select with dipswitch 1-4 the desired relay (zone) output to which the wireless device must be erased.
 - *Dipswitch 1 set to ON = zone 1, Dipswitch 2 set to ON = zone 2, Dipswitch 3 set to ON = zone 3. Dipswitch 4 set to ON = zone 4.*
- 4) By pressing the TAMP switch the desired memory location for the relay (zone) can now be selected.
 - *The amount of times that the ZONE led flashes (1,2,3, of 4 times) indicates the memory location of the zone. If a memory location is already occupied the ERASE led will illuminate constantly, if the location is free the ERASE led will flash.*
- 5) Press the learn/DELETE button to erase the device from the relay (zone) output memory. The ERASE led will now illuminate for 2 seconds and then start flashing.
- 6) The transmitter, keyfob or detector in this memory location has now been erased.
- 7) Put all dipswitches from dipswitch 1-4 back to OFF and put dipswitch 3 from dipswitch 1-6 also back to the OFF position.

ERASING (ALL) TRANSMITTERS, KEYFOBS AND DETECTORS

If enrolled transmitters, keyfobs or detectors must be deleted, perform the following steps:

- 1) Open the casing so that the print is visible.
- 2) Set dipswitch 3 and 6 on dipswitch 1-6 to ON, the red ERASE (OP11) LED will now flash quickly.
- 3) Press the learn/DELETE button to erase all wireless devices from the memory.
- 4) All wireless devices have now been erased from the AT-308's memory.
- 5) Return dipswitch 3 on dipswitch 1-6 to the OFF position

Unique PowerG ID code

A PowerG device is a 2-way wireless 868MHz device that contains a unique ID code. This ID code can only be enrolled into one AT-308 PowerG receiver. The ID code of the PowerG device is stored in the PowerG receiver module of the AT-308 and the ID code of the PowerG receiver module is stored in the PowerG device itself. If enrolling of a PowerG device fails, it may be that another ID code is already present in the PowerG device itself. To enrol the PowerG device, the ID code must first be deleted from the memory in the device. For most PowerG detectors, this is done by pressing and holding the "Enroll" button on the PowerG device until the enrolment LED on the device flashes RED once and then extinguishes. Immediately after the red LED of the enrol LED flashes, release the "Enroll" button. The ID code of the PowerG device has now been deleted and the device can be re-enrolled. To delete the ID code from a keyfob, perform the same procedure with the * key. Also, with a 1-button transmitter you perform the same operation, but now by pushing button itself.

OPERATION OF THE AT-308 RECEIVER

The enrolled Visonic PowerCode and PowerG 868Mhz transmitters, keyfobs and detectors will activate one of the relay outputs of the AT-308. Depending on the type of transmitter or detector, the relay output will pulse for approximately 2 seconds or remain toggled.

The AT-308 also has 3 open collector outputs for:

- Tamper (TAMP)
- Supervision (SUBV)
- Low battery (LOWB)

The open collector outputs can be activated by various transmitters, keyfobs and / or detectors. If a wireless device has a low battery voltage (LOWB), or the tamper contact (TAMP) is opened, the relevant open collector output will be activated for approximately 3 seconds simultaneously with the relay output when the wireless device is activated. In this way it is possible to find out which wireless device has an error status.

When a supervision alarm occurs, it is not possible to find out which transmitter, keyfob and / or detector have activated the open collector output (SUPERV).

From firmware 1.3 and above the TAMP open collector output is inverted. If the AT-308 fails due to a power loss or the receiver is defective, the TAMP output will drop off, this can thus be monitored on the intrusion panel side.

Pulse / toggle mode transmitters

This option ONLY applies to transmitters, NOT keyfobs and detectors.

- Dipswitch 2 of dipswitch 1-6 set to ON is toggle. Dipswitch 2 set to OFF is pulse.

In toggle mode, the position of the relay contact will always change (and remain so) after pressing the button on the transmitter. In pulse mode the relay contact is activated for approximately 2 seconds and switches back again.

The position of dipswitch 2 has no purpose for a PIR detector, smoke detector, gas detector, vibration sensor and water detectors. When activated, these will always pulse the output for approximately 2 seconds.

The position of dipswitch 2 has no purpose for a keyfob and magnetic contact.

When activated, the relay contact will always act as a toggle output

PIR detector battery save mode

The AT-308 receiver is equipped with an extra "Arm" input, this input can be connected to an output of an intrusion panel that indicates the status (ARMED/DISARMED) of the connected system. When using the AT-308 PG2, the "ARM" input must be connected otherwise the PowerG motion sensors will not transmit an alarm if motion is detected.

Note: It is crucial to connect the "ARM" input to the AT-308 otherwise PowerG motion sensors will not wake up and cannot trigger an alarm!

When using the AT-308 PowerCode model receiver with PowerCode motion sensors (PIR detectors) dipswitch 6 on dipswitch 1-6 does not have to be set to ON to activate the battery save mode. PowerCode motion sensors already have a built-in battery save mode that ensures that the motion sensor will go to sleep after detection for 2 minutes. Only after 2 minutes the motion sensor can detect new motion and send it to the AT-308. This limits the amount of alarm transmissions sent by the motion sensor thus extending the battery lifetime.

Note: The AT-308 PowerG receiver will communicate with all enrolled PowerG devices during start-up. This start-up procedure can take up to 1 minute within which a PowerG device may not yet be connected to the AT-308 and thus will not activate the relay output on the receiver.

AM detection

Some PowerG motion sensors and magnetic contacts have anti-mask (AM) protection. From firmware version 1.3 and above the AM detection has been added to the AT-308 receiver. Use dipswitch 4 to turn the AM function on or off. Enroll the motion sensors with AM function first, power down the AT-308 receiver, set dipswitch 4 to ON and power up the AT-308 receiver again.

The AM function only works when the AT-308 is in the disarmed state (ARM input not activated), the alarm relay output will be activated when AM occurs. When AM is restored on the detector or magnetic contact, the relay output will go back to the idle state.

DIPSWITCHES AND LED'S

Dipswitch 1-6

- | | |
|---------------------------|-------------------------------------------------------|
| 1. ON= enrol | (dipswitch 2, 3, 4, 5 and 6 OFF) |
| 2. ON= toggle / OFF= puls | (only for transmitters, not for keyfobs or detectors) |
| 3. ON= erase | (dipswitch 1, 2, 4, 5 and 6 OFF) |
| 4. Not in use | (not in use) |
| 5. Not in use | (not in use) |
| 6. ON= erase all | (only in combination with dipswitch 3) |

Dipswitch 1-4

- | | |
|----------------------|----------------------------|
| 1. ON= zone-output 1 | (dipswitch 2, 3 and 4 OFF) |
| 2. ON= zone-output 2 | (dipswitch 1, 3 and 4 OFF) |
| 3. ON= zone-output 3 | (dipswitch 1, 2 and 4 OFF) |
| 4. ON= zone-output 4 | (dipswitch 1, 2 and 3 OFF) |

Leds

- LEARN - green
- ERASE - red
- ZONE - yellow

The green LEARN LED is visible on the outside of the AT-308 receiver via the existing light guide. If all DIP switches of DIP switch 1-8 are set to OFF, the LEARN LED will illuminate when an enrolled wireless component is received by the AT-308 receiver, this way it can be visually checked whether a wireless component is being received.



WEEE-declaration

This Alphatronics product is manufactured with the most modern technology and consists of high-quality devices. Most of the devices used can be recycled.

The symbol means that this product should be recycled separately and not put in the normal waste bin together with normal household waste.

This product can be handed over to your local city council disposal point, shop or supplier.

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