

UR FOG



Notification of successful installation

Hereby informs that UR FOG machine, model
has been connected to the alarm system at:

Company Name	
Address	
Referent	E-mail address
Phone number	Mobile number

The fog machine generates a dense fog when an intrusion occurs to impede the visibility to the intruder.
The fog is safe for people, animals, things and food.
This notification has been sent or delivered to:

Firemen	
Referent	E-mail address
Phone number	Mobile number
Public security	
Referent	E-mail address
Phone number	Mobile number
Private security	
Referent	E-mail address
Phone number	Mobile number

AUTHORIZED INSTALLER:

PLACE:DATE:

SIGNATURE AND STAMP:

*UR FOG S.r.l. Sede legale / Legal Office : via Giacinto Collegno n°11 - 10143 Torino - Italy
Sede operativa e magazzino / Operation and delivery to : via Toscana n° 38 - 10099 San Mauro T.se (Torino) - Italy
C.F. / P.iva 10724850010 - Reg. imprese TO - 1157030 - Cap. Soc. Euro 10.000 int. versati
Tel. +39 011 0133037 - Fax +39 011 0133005 - e-mail : amministrazione@urfog.com*

**N.B. Ask for the PDF module
writing to: support@urfog.com**

UR FOG

Installation and use manual



mod. FAST 01 2C

ENGLISH MANUAL



UR FOG srl Via Toscana n° 38 - 10099 San Mauro Torinese - Italy

WARNING! All UR FOG fogging systems should only be used with UR FOG-branded fluids. It is strictly forbidden to use any fluid not previously authorized in writing by UR FOG srl.

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The conditions of use will be automatically accepted by breaking the security labels on the product.

1 PACKAGE CONTENT

Inside the package you will find:

- 1. The machine **FAST 01 2C**.
- 2. 2 charged fog fluid cylinders of 600 ml each.
- 3. A window sticker in order to indicate that the device is installed.
- 4. Installation and use manual.

DATE	BATTERY EXCHANGE		CYLINDER EXCHANGE		SIGNATURE
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	
	SI	NO	n.	NO	



It is mandatory to fill out this table in accordance with the law

UR Fog warranty lasts for two years and is handled directly from the dealer or authorized installer, so please contact your supplier to take advantage of warranty with the copy of the purchase document including the serial number of the machine. Exclusions of warranty: moving parts and/or damages depending on a wrong use unless a manufacturing defect is detected. Liquid and cylinders are not covered by warranty. For conditions of use, please register to our website www.urfog.com and read them carefully.



BY BREAKING SECURITY LABELS AND OPENING THE MACHINE YOU WILL ACCEPT WHAT IS INCLUDED IN THIS MANUAL AND CONDITIONS OF USE REPORTED ON OUR WEBSITE. **www.urfog.com**



We recommend to throw away the batteries into appropriate containers for recycling. Heavy metals contained in the batteries are recyclable.



Empty cylinders of Fast 01 are made in aluminum so are easily retrievable.



UR Fog srl: Via Toscana n°38 - 10099 San Mauro Torinese - Italy
Tel 011/01.33.037 Fax 011/01.33.005
support@urfog.com

Legal office: Via Giacinto Collegno 11 - 10143 - Torino - Italy

RESELLER/INSTALLER STAMP
(company to contact for the warranty)

Serial number.....

Date of installation.....

Signature of installer

Thank you for purchasing UR Fog product.

The great patented technological innovations such as the liquid injection system, the disposable cylinders, the fact that they don't need to be refilled, the ecological and economic system for the complete emptying of the cylinders, together with the heating system, all of them make the FAST fog generators the best fog devices with the best performance in the security market.

- **Reliable:** There are no high pressure pumps which lose fluid or tend to stop working. There are no high pressure pumps that must be tested periodically. UR Fog double cylinders technology is guaranteed to work in any condition.
- **Competitive:** Complete use of cylinders liquid avoiding any waste of liquid thanks to pressure control. Low power consumption, fast and powerful.
- **Simple:** Machine easy to install and able to be integrated to any existing alarm system.

The fog generated by UR Fog does not create particular problems or injuries for a human being for a short stay in a fogged room if the system is used according to the manufacturer's recommendations. Generated fog is certified as safe for people and animals from an authorized international certification company and is proved that it does not leave any residual. UR Fog Fast line are certified respecting European laws and regulations. Any certification required in specific countries are a responsibility of the distributor of that specific country. The documents related to certifications can be requested by mail to support@urfog.com. It is not guaranteed by the manufacturer the use of UR Fog system in the presence of objects that may be damaged by the contact with substances based on glycol, water and alcohol. Any employee or worker that may be exposed to fog must be warned in advance and must be checked for any allergy to the substances listed above. At the date of printing of this manual it has never been pointed out any problem related to any allergy. UR Fog is in no way responsible for any damage or condition of use that has not been required and specifically approved by any specific written request prior to the installation of its products. For fog fluid please refer to UR Fog fluid safety data sheet published on the website and carefully read it at www.urfog.com. Contact a doctor if for any reason you swallow fog fluid or if after contact with eyes or skin you have any kind of reaction, and in any case wash it immediately with water and soap. Do never stay for a long time in a room filled with fog. Do not use charged cylinders that are not the ones suggested by UR Fog and never try to recharge them, they are made for a single use. Follow your national rules for the dispose of empty cylinders. Keep UR Fog cylinders out of reach of babies and animals. The nozzle may be hot and touching it may cause burns. Do not look directly into the nozzle. Never use UR Fog products for any purpose that is not related to protection from thief or robbery (the choice of the conditions of use in case of robbery will be suggested by your security consultant).

Never use different fog fluids or add any other substance into the cylinders. Do not use or keep charged UR Fog machines in vehicles and do never transport UR Fog before 24 hours since it has been shut off. During transport it must be not armed.

Please observe the following instructions for installing **UR Fog**:

1. This appliance is not intended for use by person (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
2. Children should be supervised to ensure that they do not play with this appliance.
3. The machine must be installed avoiding to obstruct escape routes.
4. Verify the fog does not limit the visibility near: stairs, landings, moving objects that may cause: falls down, injuries or any damage to persons.
5. Do not look directly into the nozzle. Do not add any other substance into the cylinders.
6. The nozzle may reach high temperatures, touch it may cause burns.
7. When **UR Fog** produces fog avoid staying closer than 1 meter from the machine.
8. When **UR Fog** is armed avoid staying closer than 50 cm from the nozzle.
9. Before testing UR Fog, remember to report it in advance to the firefighters in your area to avoid false alarms.
10. Remember to put warning labels about the presence of **UR Fog** on the windows.
11. Report its installation to the firefighters in your area and eventually to other institutions if needed.
12. It is necessary to add an external switch to separate the fog generator from the alarm system and it should be activated before the maintenance to avoid that input tests, for example, can activate the fog generator.
13. Never direct the fog jet towards an object or a wall less than 2 meters away and if possible increase the suggested minimum distance. Thanks to the power of the jet, **UR Fog** reaches and exceeds more than 10 meters away in the first 3 seconds from the point where the machine is installed.
14. Setting the shooting time interval between the minimum and maximum shown in the shooting table, avoid "overshooting" even if the produced fog is dry and generally doesn't leave residue. A shot that goes far beyond the recommended seconds can create a residue problems in the room.
16. **UR Fog** continues to be effective for up to 2 hours and 30 minutes without 220V or 110V main power thanks to the insulation system which maintains the temperature in the heating system.
16. Install at an height of about 2,5 meters not to let it be reached, avoiding possible tampering.
17. Install with a maximum inclination of 20°.
18. Do not move the machine when it is still hot.
19. The main body of **UR Fog**, which has the heating system enclosed inside a metal frame, should not be opened unless by specific and authorized service centers. Do not open and touch for any reason the insulation before 24 hours **UR Fog** has been shut off. The internal part may reach really high temperature.
20. Do not activate the **UR Fog** machine before the installation is completed.
21. Insert the cylinders as the last procedure and verify the anti-tampering function.
22. When the installation is finished, always test the system.
23. From the moment of **UR Fog** activation, at least one hour is necessary to reach the minimum temperature needed for the fog shooting.
24. Install **UR Fog** avoiding any obstacles in front of it which can prevent the spreading of the fog.
25. The external temperature of **UR Fog** can change from room temperature to 50 °C.
26. The tip of a stranded conductor should not be soft-soldered where the conductor is subjected to contact pressure.
27. The **UR Fog** machine should not be exposed to water spray or dripping.
28. Request to **UR Fog** or its distributors to take part in courses for installers to ensure the optimal installation of the equipment.
29. The content of the bags is mechanically predetermined and can be subject to variations +/- 10%

Serious faults can occur in the following cases:

- Temporary error of thermocouple, due to lightning or interference (resettable)
- Difference of potential on ground connection (resettable)
- Breakage of the thermocouple (contact the technical support)
- Failure of the heater (contact the technical support)
- Interruption of the thermal fuse (contact the technical support)

When a serious fault occur, besides changing the state of FAULT OUTPUT (see Paragraph 11), the blue LED flashes and the buzzer emits a continuous sound for the next 20 minutes, after this period the buzzer will stop automatically, while the blue LED will continue flashing until the machine will be totally unarmed (220V/110 V, 12 V, batteries) for some seconds.

At power on, the electronic board will enter stand-by mode for 30 minutes and this status will be signaled by an alternative flashing of red and blue LED. Don not switch off the electronic board before 30 minutes, because in this case time count will start from zero again.

In case, after this procedure, the machine is still in alarm status, contact the technical support.

FAULT	POSSIBLE CAUSE	POSSIBLE SOLUTION
The machine is armed (BLUE LED ON) But does not shoot	The front red LED is on	Reset of cylinders has not been made Reset as described in paragraph 16 Empty cylinders – Change the cylinders as describe in paragraph 13
	The front green LED flashes	The heat exchanger has not yet reached minimum temperature for shooting, waiting for flashing light to stop (average heating time is 80')
	After arming, the machine does not accept shooting command	For security reasons and to avoid false fog emissions at power on, when the machine is armed, it becomes effectively operating only after 20". After this time, the emission is instantaneous.
	Wiring error	Verify, once the alarm is on, that there is a tension of 12 V at least between - GND(5) + SHOOT(4)
Blue LED flashes The Buzzer sounds continuously BLUE and RED LEDs flash alternatively	Overvoltage (110/220V)	Try to make a system reset like in Paragraph 16 In case of unsuccessful reset, possible fault of the electronic board, contact technical support.
	Over temperature of the electronic board	Verify that there is sufficient ventilation (Paragraph 5) For reset see Paragraph 16
	Disturbances / interferences or potential differences between equipments	Strong interferences (lightning) can cause a reading error of the thermocouple, make the reset (Paragraph 16). An unsuccessful reset may be due to potential differences or to a fault
		In large size plants with more than one fog generator connected to the same alarm centre, they may create potential differences between equipments and it can be necessary to uncouple them
	Error in the heating system	Possible faults: thermocouple, resistance or fuse Do not try to repair. Contact technical support
Does not arm, BLUE LED does not power on	Wiring error	Verify, once the alarm is on, that there is a tension of 11 V at least between - GND(5) + ARM(3)
When pressing the cylinder reset button, the buzzer doesn't sound and all front LEDs flash but red LED does not reset	P3 Jumper left in "SET" position	CAUTION!!! In this case shooting time has been reset Cylinders reset – Paragraph 13 Shooting time setting - Paragraph 11
The cylinder does not enter	The plate is raised	Pressure down and the pull
The cylinder does not exit	The cylinder is stuck in the valvebody	Pressure down and the pull
When setting shooting time, the buzzer does not sound and LEDs do not flash	P3 Jumper left in "RESET" position	See shooting time settings in paragraph 11



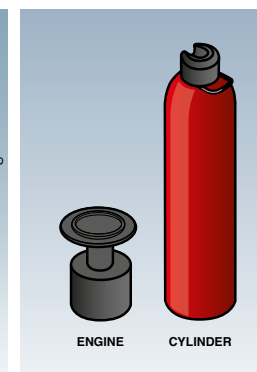
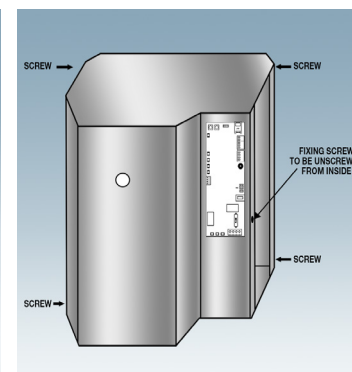
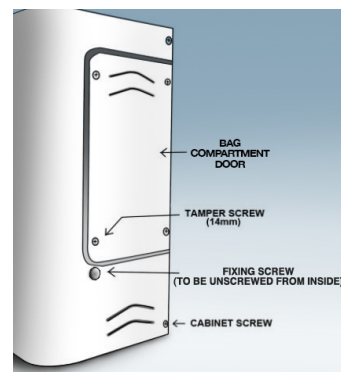
It is always recommended to fix the machine on a wall even when it is placed on a flat surface. Always verify that the bracket or the support surface are suitable for the weight of the machine. It is suggested not to install the machine behind walls in a limited closed area without a specific ventilation to prevent a possible overheating. In case of installation at the ceiling, it is recommended to use the specific optional bracket. In case of installation on a wall it's possible to ask for a 7 cm nozzle extension.



The cylinders supplied with the equipment are intended to be used only for a vertical (standard) installation. In case of horizontal installation, please refer to your authorized reseller/distributor to get the appropriate cylinders. It's necessary to insert the cylinders with the black plastic plug.

After removing the machine from the package, unscrew the screws that stop the right side panel and remove it. Pay attention to the screw below on the left as it's longer than the others, unscrew the anti-tamper screw from the internal part and then the screws of the cover. Inside it is possible to see the front part of the electronic circuit, from here on called PCB.

It is recommended to install the fogging system Fast 01 2C vertically. If it is needed to install Fast 01 2C horizontally, it is necessary to order a special machine prepared for such installation and strictly follow the installation instructions.



*Industrial standard as from other manufacturers	FAST 01 2C
Weight without tanks	22 Kg
Fog emitted in a single shot	1200/3600* m ³
Total fog emission capacity	1800/5400* m ³
Fog tanks capacity	2 x 600 ml
Work time without mains power	more than 2 hours 30 minutes
Max power on heating system	2 X 300 w
Average power consumption during heating process	540 w
Max heating time	about 80 minutes
Max consumption in steady state	60w
Power consumption at 12V	500 mA while shooting 60 mA in stand by
Average batteries lifetime	12 months with 10 shots
Door tamper	Tamper screw
Anti-tear off and anti-shift	Accelerometer



The “empty” signal does not mean only that the cylinder is empty, but also warns that the system is in reserve. For this reason is very important to make the “reset” only when you actually exchange the cylinder or you will lose the seconds counting. (See paragraph 13)

WARNING :

- Loosened ferrule can cause dropping
- Do not disconnect the machine immediately after the shot
- Change batteries every year
- Change the cylinder as soon as the “empty” signal appears

FAULT	POSSIBLE CAUSE	POSSIBLE SOLUTION
At power on, you hear a relay clicking cyclically	It is not a fault	When the machine is still cold or just shot, until it reaches the working temperature, a relay is activated together with the triac, in order to lower power consumption
At power on, you do not hear a relay clicking	When the electronic board is powered on, the microprocessor makes a diagnostic test	During the test, although green leds are flashing, the heater is not working. Wait few minutes
	Fixed green led	The heater reached the working temperature, so the relay is not activated, if not occasionally
	Green led powered off	No 110/220 V power supply, verify there is a tension on the power connectors and wait few minutes
When the machine gets armed, you hear a buzz similar to a spinning motor	The compressor verifies there is not any obstruction or sabotage in the fog emission circuit	The compressor monitors the nozzle for about 15 minutes. After this time, it deactivates automatically. Even if the machine gets unarmed, the compressor keeps on working up to 15 minutes. If the machine is unarmed and then rearmed, time count starts from zero
When the machine gets armed, if never shot, the nozzle will blow a little fog	All our machines are tested during trial phase, thus a little fog fluid always remain inside the pipes	This ejection occurs when the machine is put into operation for the first time and progressively decreases until it completely disappears. It can also occur after disassembling, reinstalling or transport, during the first times the machine is activated
The buzzer emits 1 bip/minute	The +12 V input voltage is too low or too high	Check the external power supply or the alarm unit
The buzzer emits 2 bips/minutes	Low battery but can still shoot	Replace batteries – See paragraph 14
The buzzer emits 3 bips/minute	Low battery, can not shoot	Replace batteries – See paragraph 14
The buzzer emits 10 consecutive beeps each minute	No batteries inside	Insert batteries
	False contact battery case	Move the batteries, turn them
	Connector not inserted correctly	Remove and reinsert the connector
	In any case it is useful to use a tester to verify the presence of voltage on the battery case	

UR Fog generators do not require special care, however, it is recommended the support of qualified and authorized personnel for periodic annual monitoring, taking into account the following:

- 1- Verify the good working condition of the batteries
- 2- It is advisable to replace the cylinders after 2 years from the installation
- 3- Verify the lock of the nozzle ferrule
- 4- Verify the entirety of the nozzle sphere
- 5- Check the air tightness of the circuit and the switch functioning
- 6- Intervention report redaction and release of conformity declaration according to 37/08 order in case of provision

Entirety of the nozzle sphere

Verify that the nozzle hole is cylindric. The average duration of the nozzle sphere depends on the number and duration of the shooting, around 8L of glycol.

Verification of batteries and battery case

When do you need to change the batteries:

- After one year of use.
- Within the deadline printed on them.
- When it is reported that they stopped to function.

If the batteries run out, it starts a sequence of acoustic signals:

- 2 bips/minute - battery is low,
- 3 bips/minutes - machine can't shoot, battery too low,
- 10 bips/minutes - batteries missing or bad contact on battery case, plug or cable interrupted.

The anomaly of the batteries also causes the activation of the output "fault", useful to signal a possible anomaly.

When the empty batteries are removed from the battery case, the buzzer will sound a sequence of 10 bips for each minute.

After re-inserting the new batteries, it is suggested to wait at least one minute, to verify that the sequence of beeps is not repeated.

If the sequence of beeps does not stop, you have to check the polarity of the batteries and, if correct, check if the batteries are in correct contact with the battery case.

In this step it is suggested to verify a battery case with a tester.

It is necessary the use of alkaline batteries of excellent quality.

The use of rechargeable batteries is not allowed.

When you close the cylinder compartment, the buzzer will sound to confirm the correct closing of the anti-tamper system.



We recommend to throw away the batteries in the appropriate waste containers for recycling. Heavy metals contained in them are recyclable.

Checking of the pneumatic circuit and pressure control system



THE TEST CAN BE DONE JUST BY QUALIFIED PERSONNEL

Before starting the test of the pressure control it's necessary:

- to remove the cylinders
- to be sure that the nozzle is cold
- to be sure that the nozzle tamper pump is activated

The pneumatic seal test must be done within a few seconds when the machine for nozzle tamper control is turned on, as the nozzle temperature rises rapidly reaching temperatures that may cause serious burns.

The air coming out of the nozzle exceeds 200° C.

IT'S ADVISABLE TO USE GLOWES

- 1 – Obstruct the nozzle with soft and insulating material (for example an eraser).
 - 2 – Keep the nozzle obstructed, press the button P3 previously moved in RESET position (see paragraph 14) and keep it pressed until you hear that the pump is activated.
 - 3 – Wait for the activation of the buzzer (Max 30")
 - 4 – Remove the obstruction taking away your hand quickly to avoid to be in contact with the hot emission of air. The buzzer must stop.
- If after 30" you don't hear the buzzer, may be a loss inside the circuit; please contact the service center.
 - If after removing the obstruction the buzzer doesn't stop, it means that there is an obstruction; please contact the service center.

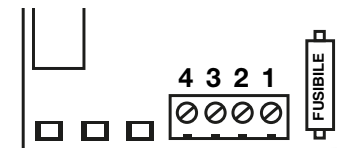
230V or 110V power source supplies energy only to the heating system. The electronic board and the cylinder's motors are supplied from the alarm system and batteries. The heating element is of 600W, at the very beginning power consumption is about 500W and in some minutes it goes down reaching average consumption of about 60W.



Do not use: inverter or UPS unless you have the certainty that they generate a true sine wave, not a rebuilt one. Ask to the UPS manufacturer the correspondence of these characteristics before the installation.

- The max current to be considered for the system is 2,3 A
- The connection to the 230V or 110V electricity grid must be performed by a qualified technician.
- Connect the equipment to the electricity grid only after you have completed the installation.
- It is necessary to connect the ground terminal.
- The machine has to be connected to the power supply through a disconnecting device that has to brake both connections and must be thermo magnetic switch.

- 1 Phase 220V / 110V
- 2 Neutral 220V / 110V
- 3 Ground connection
- 4 Ground connection for heat exchanger and cabinet (never disconnect)



IF YOU NEED TO REPLACE THE FUSE, USE THE ONE WITH EXACTLY SAME SPECIFICATIONS. IF YOU HAVE DOUBTS, ASK TO YOUR AUTHORIZED DEALER.

N.B. It's available an optional power supply with charger of NiMH batteries and relays outputs – see paragraph 10

The batteries are intended to maintain the efficiency of the electronic board, allowing the fog emission even in absence of power supply from the electricity grid, until the heating system has a sufficient temperature.



The batteries also have the purpose of activating the motors that lift up the plates holding the cylinders, even when the main power supply or 12 V from the alarm system is available.

Without batteries, with dead batteries, rechargeable or poor quality ones, the motors do not lift up the plates that push the cylinders.

For this reason it is important:

- To use only high quality alkaline batteries
- To replace them within the expiry date
- to replace them every 12 months anyway
- When Fast 01 2C report the signal of low battery (Paragraph 14-15)
- Test the battery case during every maintenance (Paragraph 15)

After inserting the batteries, it is important to check that they are in good contact with the battery case to guarantee the proper functioning. For a description on how to make tests, refer to Paragraph 13.

VERIFICATION OF BATTERIES AND BATTERY CASE

You need to replace the batteries:

- After one year of use
- Within expiration date printed on them
- When it is reported they are exhausted.

If the batteries run out, a sequence of acoustic signals will start as follows:

- 2 bip / minute exhausting batteries
- 3 bip / minute machine can't shoot, battery too low
- 10 bip / minute batteries are missing absent or bad contact on the battery case, plug or cable interrupted.

Any anomaly of the batteries also causes the activation of "fault" output, useful to remotely signal a possible anomaly.

When discharged batteries are removed from battery case, the buzzer will sound a sequence of 10 bips per minute.

After re-inserting the batteries, it is suggested to wait at least for one minute, in order to verify that the sequence of beeps is not repeated.

If the sequence of beeps does not stop, you should verify the polarity of the batteries is correct and, in that case, that the batteries are in contact with the battery case. At this stage, it may be useful to use a tester.

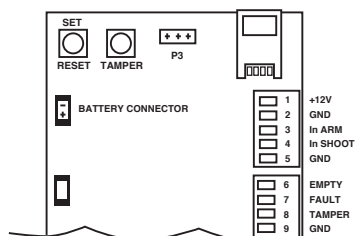
It is necessary to use high quality alkaline batteries.

It is possible to use lithium batteries - ask information to your retailer.

When you close the door, the buzzer will sound to confirm the anti-tamper system is correctly closed.

9

DESCRIPTION AND INPUT AND OUTPUT CONNECTIONS



INPUTS

- + 12 V Power input**
- GND Power input**

In these inputs is necessary to provide a stable supply, between 11V and 14V C.C. from the alarm control panel or from an external 12V power supply. This power is necessary to the operation of the LED and for the logic of operation.

In the absence of voltage on this input, the logic part will continue to operate, but the heater will not. For about 2 hours and 30 minutes, or until the temperature of the heat exchanger (heating system) will allow, Fast 01 may produce fog.

The maximum current drawn from UR Fog on this input is 230 mA.

- ARM Arming input**

By connecting this input to positive, Fast 01 2C is armed, blue frontal led is switched on and when the machine reaches proper temperature it means that it is ready for shooting.

- SHOOT shooting input**

Putting this input to positive, if Fast 01 2C is hot and armed, starts fog emission for the set time (see paragraph 11)

In case of alarm, when opening ARM input, the fog emission stops immediately, even if the time set wasn't reached.

- GND Negative reference**

OUTPUTS

- EMPTY Empty cylinder output**

This output (NPN Open Collector) closes towards negative direction when at least one of the two cylinders is empty.

- FAULT Fault output**

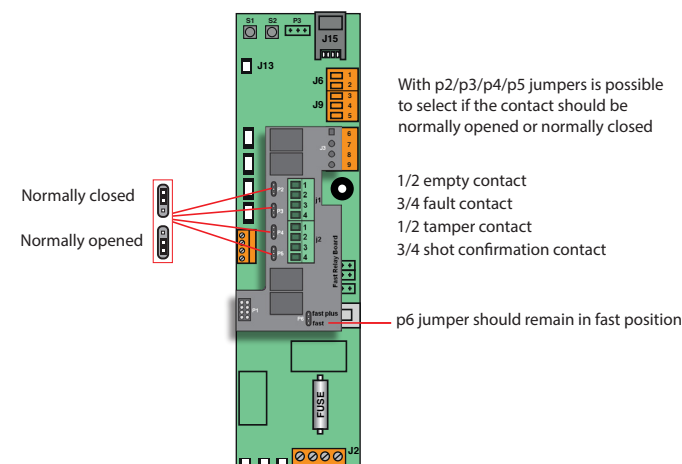
This output (NPN Open Collector) closes towards negative when there is a serious malfunction (such as expired batteries, fault of power supply or temperature control fault), which compromises the functioning of the device and which requires a technical action. Fault signal due to supply absence has a delay of 20 minutes.

- TAMPER Tamper output**

This output (NPN Open Collector) closes towards negative direction when you open the door cylinders or when the accelerometer detects a sudden movement (such as the detachment from the wall).

- GND Negative reference**

H - Example of connection of FAST 01 2C outputs with relay board.



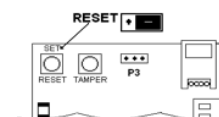
13

INSTALLATION AND CYLINDERS EXCHANGE

The cylinders for FAST series are guaranteed to work until the expiration date indicated on the top.

Expired cylinders should be substituted even if not yet used / exhausted.

It is recommended to return them to your dealer, who will handle the disposal.



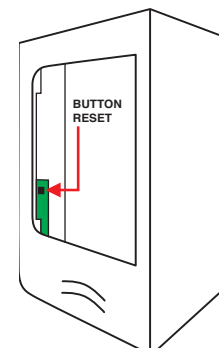
After removing the screws of the door, simply take away the cylinders and reset the warning light for empty cylinder. After this operation, insert the new cylinder until you hear the "click" of the plastic support at its top that goes into the slot, then close the door.

If the cylinder seemed "stuck" in the upper part do NOT with force, make a pressure with two fingers on the top of the cylinder, such as to lower it. Then try again to remove it.

If the cylinder does not enter, check if cylinder plate of the motor remains lifted.

In case only one empty cylinder has to be replaced, it is recommended to replace it with the full one already in the machine, while a new cylinder will go to replace the latter.

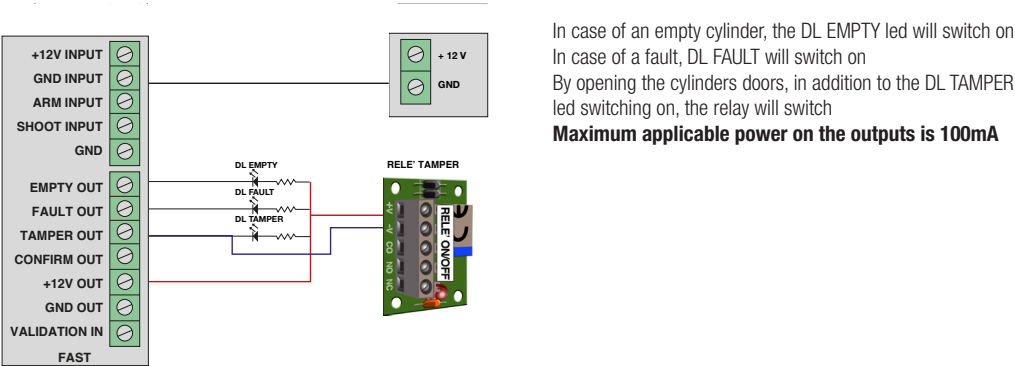
This is in order to ensure proper rotation of the cylinders and to avoid that a cylinder can remain unused for a long time within the device.



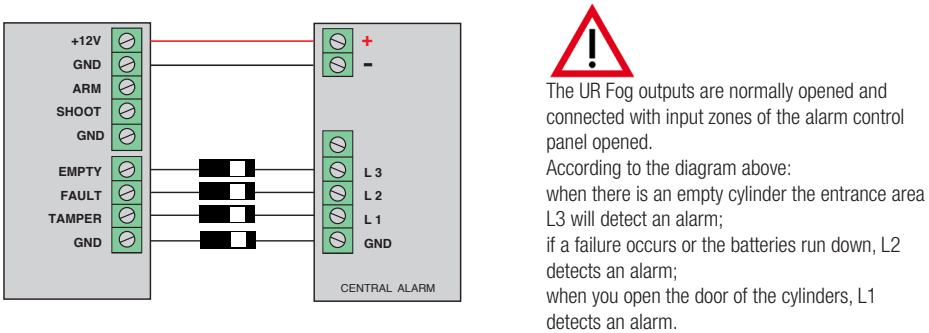
When you close the door, the buzzer will make a sound to confirm the tamper is closed.
Attention: Before opening the side doors, make sure the alarm control panel is in "service" mode, so that the opening of "anti-sabotage or tamper" circuit will not cause any alarm.

In the diagram above the control panel, as example, provides to UR Fog power supply between 11 and 14V DC 250 mA max. The ON/OFF output of this power plant is an Open Collector NPN opened when the system is off and it is stably closed to negative for all the time in which the system still lit. The alarm output of the plant is normally open and becomes positive during the alarm time.

B - Example of connection of the FAST 01 2C outputs to drive LEDs and / or relays

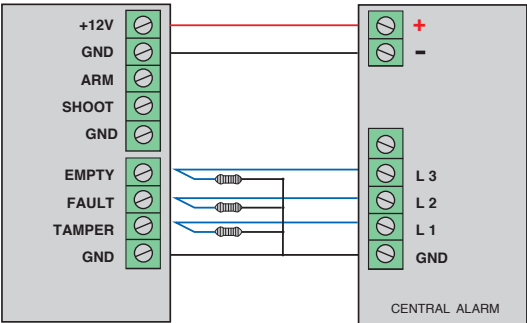


C - Example of connection of the FAST 01 2C outputs with inputs of an antitheft normally opened with diods (1N4148)



D - Examples of connections of the FAST 01 2C outputs with balanced inputs of an antitheft

In this diagram, putting the resistance value required by the alarm control panel used in the terminal UR Fog, with not used outputs the central will see the correct resistance, while following the activation of an output, you will have a pull-down causing the alarm of the corresponding zone.



FOG FLOW DIRECTION

To ensure the right direction to fog flow, it is recommended to insert a screwdriver of the diameter of the hole and, without forcing, orient the nozzle in the correct direction. This allows you to clearly see the direction and keep it in place while tightening. To screw and unscrew the nozzle, you should use a pair of pliers in good condition, to avoid damaging the plating. Do not overscrew the nozzle, it is sufficient that the Teflon nozzle does not move. Do not flow directly on objects or walls less than 2 meters away or to the floor if it is installed at a height lower than 2.50 meters. During first two shots, teflon sphere settles, so it is needed to tighten it again.

WARNING!! After fog emission and for few minutes, the nozzle is very hot. **RISK OF BURNS IF TOUCHED by bare hands.**

Remember, it is necessary to connect all three outputs to an alarm central or an electronic panel that can see all those information in real time and take proper action. In order to avoid accidental activation with subsequent fog emission, the inputs are in “negative security”, for this reason the disconnection of a wire does not cause activation. So it is necessary to check carefully the reliability of connections and protect the cables to the control panel to avoid the risk of accidental damages.

10

FRONT LEDS

BLUE LED

When on: it means that the machine is armed and ready to shoot, if the heater has reached the working temperature.

When flashing: means that something is wrong. See paragraph 15 “Faults and possible solutions”

RED LED

When on: means that at least one cylinder is empty. See paragraph 13 “Cylinders exchange and reset”

GREEN LED

When on: Fast 01 2C is hot and ready for fog emission.

When flashing: means that the heating process is in progress. Fast 01 is not ready to shoot.

IF BLUE LED IS FLASHING, TOGETHER WITH A CONTINUOUS SOUND FROM THE BUZZER, AN ANOMALY IS DETECTED. SEE PARAGRAPH 16 “RESET FROM FAULT CONDITION”.

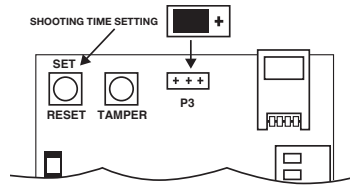
To set the shooting time, after opening the cylinders compartment door as showed in Paragraph 5, at the top of the PCB, you must put the jumper P3 in "setting" position. Then, holding down the S1 "SET", 3 LEDs on the front will start flashing and each flash is equivalent to one second. If you press the button again, the shooting time is not added to the one previously set, but will restart from zero.

N.B. The button in the cylinders compartment showed in next paragraph, is linked to Set/Reset button.

Therefore, after setting shooting time, it is recommendable to place the P3 jumper in RESET position (right side), in order to make this operation without removing the cover and avoid to zero shooting time.

N.B. Before opening side door ensure that the control panel is set to "service", so that the opening of "anti-sabotage or tamper" circuit does not cause any shooting.

N.B. To correctly dimension the machines it is needed to verify that the saturation of the area occurs in faster time than the one supposed for the theft.



RECOMMENDED SHOOTING SECONDS ACCORDING TO THE VOLUME SPACE TO PROTECT (m³)

Systems FAST 01 2C are able to produce fog for a maximum respectively 70 seconds per single shot. The maximum quantity of 10,7 ml/s allows to fill an area of about 1200 m³.

There might be cases in which, due to specific characteristic of the location, nozzle type, levels of temperature and air pressure, degree of the fog density and light in the target area, the shooting time can be increased. For example, above 5 m of height the shooting time must be integrated and above 7 m, every additional meter should be considered as double.

$$(H \times L \times P) \times D \times V \times R \times I$$

HxLxP-----Height x Width x Depth of the area to protect

D-----Density of the produced fog

V-----Temperature and air pressure

R-----Acceptable residue in case of saturation of V parameter

I-----Intensity of the surface light

The following tables indicate the suggested fog emission in relation to the number of seconds of shooting set in average condition of temperature, air pressure and humidity.

TABLE OF SHOOTING FAST 01 2C

m³ to protect	seconds of emission	m³ to protect	seconds of emission	m³ to protect	seconds of emission
16-19 (57*)	1	401-482 (1446*)	25	786-944 (2832*)	49
32-39 (117*)	2	417-501 (1503*)	26	803-963 (2889*)	50
48-58 (174*)	3	433-520 (1560*)	27	819-982 (2946*)	51
64-77 (231*)	4	449-539 (1617*)	28	835-1002 (3006*)	52
80-96 (288*)	5	465-559 (1677*)	29	851-1021 (3063*)	53
96-116 (348*)	6	482-578 (1734*)	30	867-1040 (3120*)	54
112-135 (405*)	7	498-597 (1791*)	31	883-1059 (3177*)	55
128-154 (462*)	8	514-616 (1848*)	32	899-1079 (3237*)	56
144-173 (519*)	9	530-635 (1886*)	33	915-1098 (3294*)	57
161-193 (579*)	10	546-655 (1965*)	34	931-1117 (3351*)	58
177-212 (636*)	11	562-674 (2022*)	35	947-1136 (3408*)	59
193-231 (693*)	12	578-693 (2079*)	36	963-1156 (3468*)	60
209-250 (750*)	13	594-713 (2139*)	37	979-1175 (3525*)	61
225-270 (810*)	14	610-732 (2196*)	38	995-1194 (3582*)	62
241-289 (867*)	15	626-751 (2253*)	39	1011-1213 (3639*)	63
257-308 (924*)	16	642-770 (2310*)	40	1027-1233 (3699*)	64
273-327 (981*)	17	658-790 (2370*)	41	1043-1252 (3756*)	65
289-347 (1041*)	18	674-809 (2427*)	42	1059-1271 (3813*)	66
305-366 (1098*)	19	690-828 (2484*)	43	1075-1290 (3870*)	67
321-385 (1155*)	20	722-867 (2601*)	44	1091-1310 (2622*)	68
337-404 (1212*)	21	706-874 (2622*)	45	1107-1329 (3987*)	69
353-424 (1272*)	22	738-886 (2658*)	46	1124-1348 (4044*)	70
369-452 (1356*)	23	754-905 (2715*)	47		
385-462 (1386*)	24	770-924 (2772*)	48		

* Industrial standard as from other manufacturers

The diagrams and examples below are intended to provide only for a "better understanding" of the operation of the inputs / outputs. None of the diagrams below represents the "single scheme to perform" as, in respect of the reference standard, there are specific indications and only using all inputs and outputs on the PCB it is possible to abide by the standard.

For a connection in "anti-robbery mode" it's necessary a careful evaluation of the risks by a security consultant.

- A** Example of connection FAST 01 2C inputs with outputs of a central antitheft
- B** Example of connection of the FAST 01 2C outputs to drive LEDs and / or relays
- C** Example of connection of the FAST 01 2C outputs with inputs of an antitheft normally opened with diodes needed only with some equipments.
- D** Example of connection of the FAST 01 2C outputs with balanced inputs of an antitheft
- E** Example of connection of the FAST 01 2C outputs with relay board

A - Example of connection FAST 01 2C inputs with outputs of a central antitheft

