

# FAST 03 & FAST 03 PRO PLUS

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## Quick Manual



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STRATEL SDN BHD

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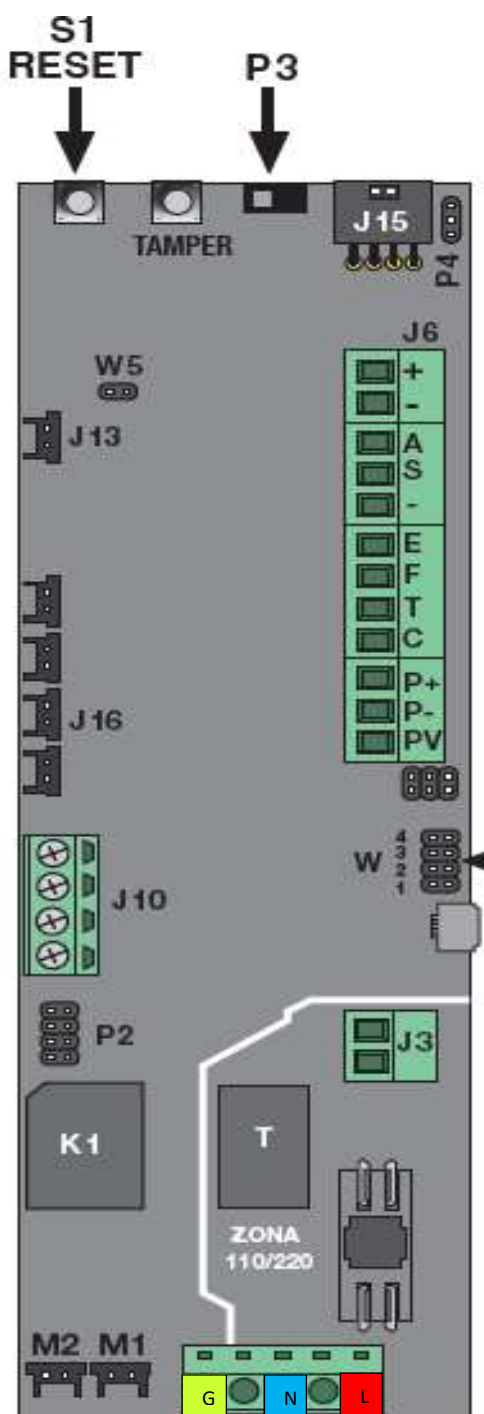
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## 1) Specifications

	FAST 03	FAST 03 PRO PLUS
<b>GENERAL SPECIFICATIONS</b>		
Weight of machine only	10 kg	11 kg
Weight with cylinders and battery	12 kg	13 kg
Dimension of machine	26.5x23.0xh34.5	27.5x23.0xh44.0
Work time without main power	2.5 hours	2.5 hours
Heating time	About 45 mins	About 40 mins
Vertical & horizontal mounting (cylinder dependent)	Yes	Yes
Nozzle tamper	Yes	Yes
<b>FOG GENERATOR</b>		
Fog emission in a single shot (zero visibility)	200 m <sup>3</sup>	260 m <sup>3</sup>
Fog emission in a single shot (up to 1.5m visibility)	300 m <sup>3</sup>	400 m <sup>3</sup>
Max. seconds of fog in a single shot	20 seconds	20 seconds
Total seconds of fog	30 seconds	45 seconds
Total emission capacity	450 m <sup>3</sup>	900 m <sup>3</sup>
No. of cylinder cannisters	1	1
Cylinders capacity	400 ml	600 ml
Amount of liquid used per second of shoot	13 ml	13 ml
Cylinder model	RFC400V/H	RFC600V/H
<b>ELECTRICAL SPECIFICATIONS</b>		
Power supply	220 - 240V	220 - 240V
Average Power Consumption	30 - 50W	30 - 50W
Max power on heating system	320W	320W
Maximum current consumption at 12V during shoot	250mA	250mA
Maximum current consumption at 12V in stand-by	60mA	60mA
Battery type	6 x AA alkaline (not rechargeable)	2AH 12V SLA (rechargeable)
Average battery lifetime	12 months 10 shoots	24 months
Door anti-tampering	Micro switch	Micro switch
Anti-tear off/Anti-shift	Accelerometer	Accelerometer
Wired inputs for arming & shooting	Yes	Yes
Validation input (PIR)	No	Yes
Anti-robbery input	Yes	Yes
Empty cannister output	Yes	Yes
Tamper output	Yes	Yes
Fault indication output	Yes	Yes
Confirmation output	No	Yes

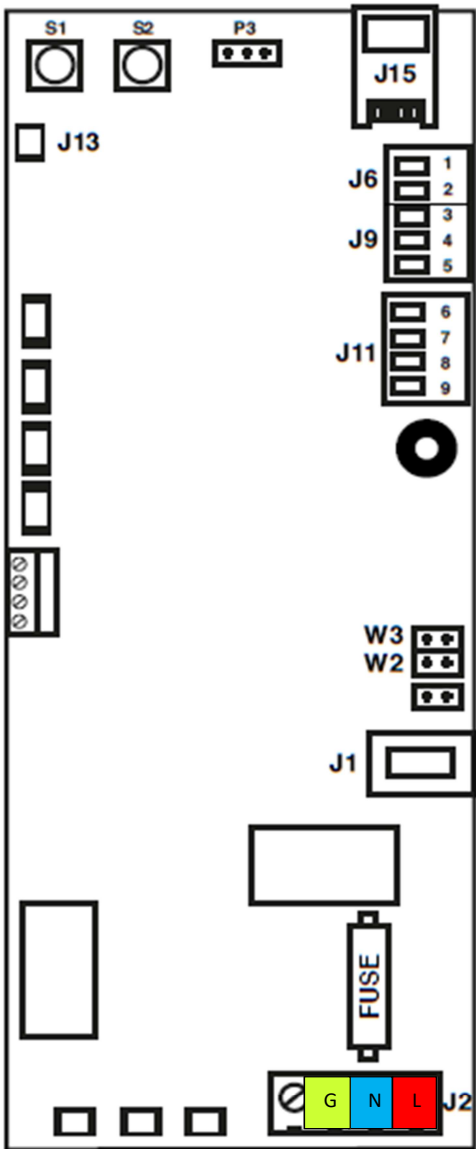
## 2) Circuit board configuration settings

FAST 03 PRO PLUS terminals:



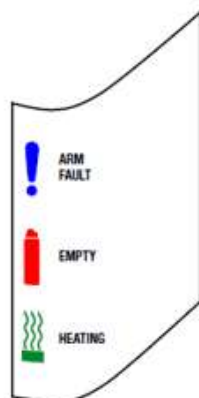
S1	SET/RESET	
P1	BDM connector for firmware	
P2	Connector for expansion board	
P3	Functional jumper	
J15	Anti-robbery inputs	
J6	+	+12VDC input
	-	-12VDC input
	A	Arm input
	S	Shoot input
	-	GND input
	E	Empty output
	F	Fault output
	T	Tamper output
	C	Confirmation output
	P+	+12VDC PIR supply (300mA)
	P-	-12VDC PIR supply (300mA)
	PV	Validation input
W1	Serial port P2 activation	
W2	Anti-robbery trigger	
W3	Service mode	
W4	Validation trigger	
W5	Rechargeable battery activation	

FAST 03 terminals:



S1	SET/RESET	
S2	Door tamper	
P3	Functional jumper	
J12	Connector for battery pack	
J15	Anti-robbery inputs	
J6	1	+12VDC input
	2	-12VDC input
	3	Arm input
	4	Shoot input
	5	GND input
	6	Empty output
	7	Fault output
	8	Tamper output
	9	GND input
W2	Anti-robbery trigger	
W3	Service mode	
J2	AC source inputs	

## LED indicator



### LED BLUE :

Steady - Machine is armed and ready to shoot  
Flashing – Fault indication

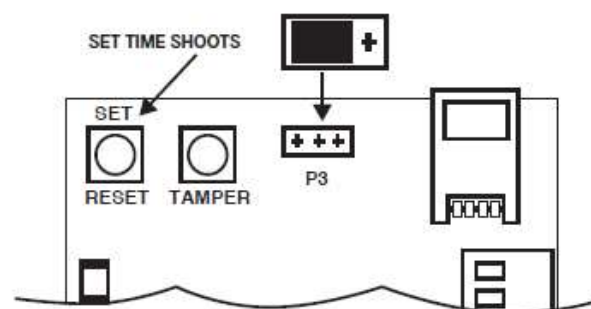
### LED RED :

Steady – Cylinder is empty or it is in reserve

### LED GREEN :

Flashing – Heating process in progress, not ready for fog emission  
Steady – Machine is ready for fog emission

## 3) Fog emission time settings



Step 1: move the jumper towards the left position P3 (closer to buttons S1/S2)

Step 2: holding down the button S1 “SET”, 6 LEDs on the front will flash 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.

Step 3: after setting, move the jumper back towards the right position P3

Shooting table for FAST 03

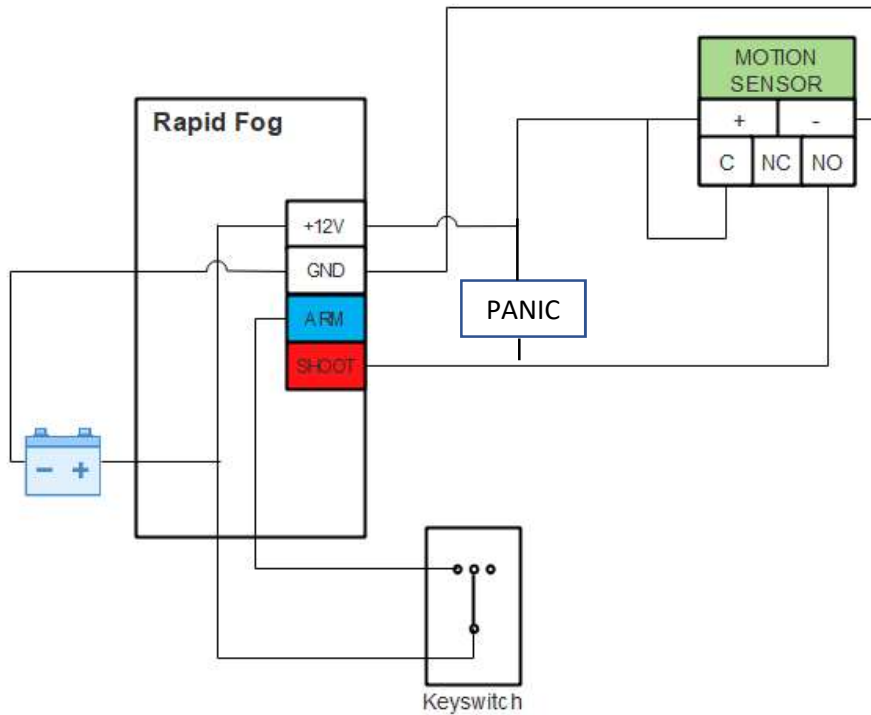
$m^3$ to protect	Seconds of emission	$m^3$ to protect	Seconds of emission
10 – 15	1	110 – 165	11
20 – 30	2	120 – 180	12
30 – 45	3	130 – 195	13
40 – 60	4	140 – 210	14
50 – 75	5	150 – 225	15
60 – 90	6	160 – 240	16
70 – 105	7	170 – 255	17
80 – 120	8	180 – 270	18
90 – 135	9	190 – 285	19
100 – 150	10	200 – 300	20

Shooting table for FAST 03 PRO PLUS

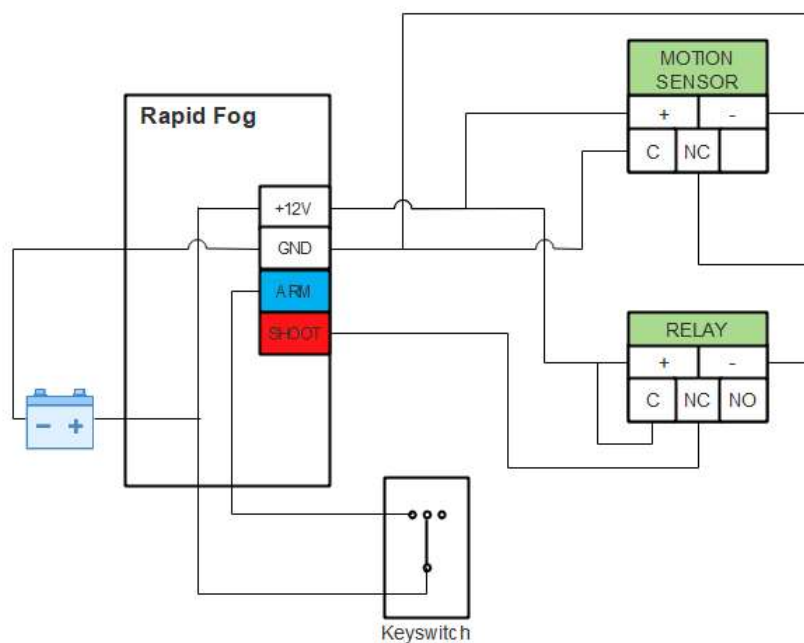
$m^3$ to protect	Seconds of emission	$m^3$ to protect	Seconds of emission
13 – 20	1	143 – 220	11
26 – 40	2	156 – 240	12
39 – 60	3	169 – 260	13
52 – 80	4	182 – 280	14
65 – 100	5	195 – 300	15
78 – 120	6	208 – 320	16
91 – 140	7	221 – 340	17
104 – 160	8	234 – 360	18
117 – 180	9	247 – 380	19
130 – 200	10	260 – 400	20

## 4) Stand-alone Wiring diagrams

### 4.1 Key switch + Panic button + PIR connection (NO)



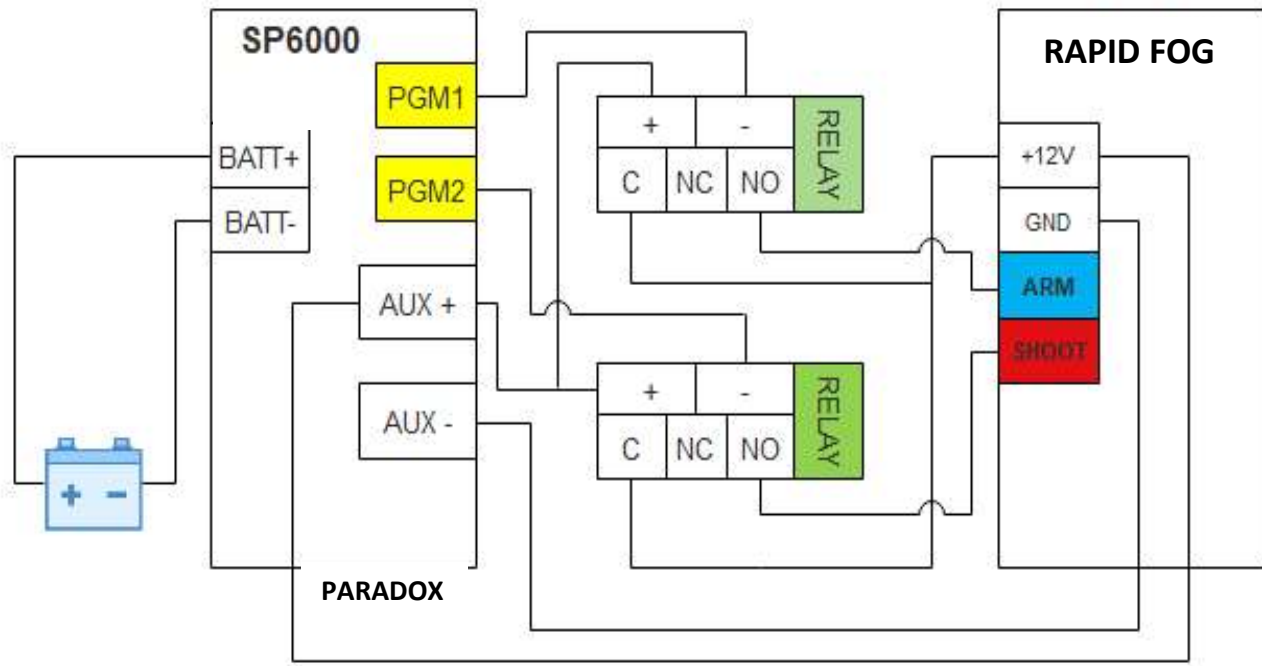
### 4.2 Key switch + Panic button + PIR connection (NC)





## 5) Integration with Paradox alarm panels

### 5.1 RF Arm & Shoot Inputs with battery backup



When the alarm panel is armed, exit delay of 20 seconds begins and PGM1 is activated. PGM1 activation arms the RF device, indicated by the blue frontal LED.

#### SP/MG Programming:

##### PGM 1 (ARM input)

Section 220, enter [02 14 99]

Section 221, enter [02 11 99]

Section 281, enter [000]

##### PGM2 (SHOOT trigger)

Section 222, enter [02 06 99]

Section 223, enter [00 00 00]

Section 261, off [1]

Section 282, enter [002]

##### EXIT DELAY (20 secs)

Section 745, enter [020]

## EVO Programming

### PGM1 (ARM input)

Section [0901], enter (Panel S/N) enter (001)

1. enter [010]
2. enter [000]
3. enter [001]
4. enter [255]
5. enter [014]
6. enter [255]
7. enter [000]
8. enter [000]
9. enter [000]
10. turn of all; PGM options

### PGM2 (SHOOT input)

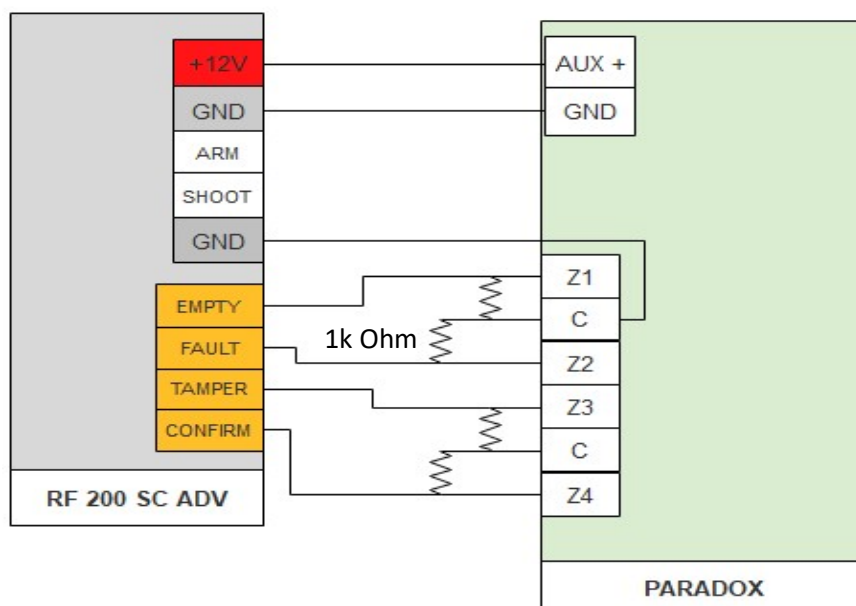
Section [0902], enter (Panel S/N) enter (002)

1. enter [024]
2. enter [255]
3. enter [000]
4. enter [000]
5. enter [016]
6. enter [255]
7. enter [000]
8. enter [000]
9. enter [002]; Timer
10. turn of all; PGM options

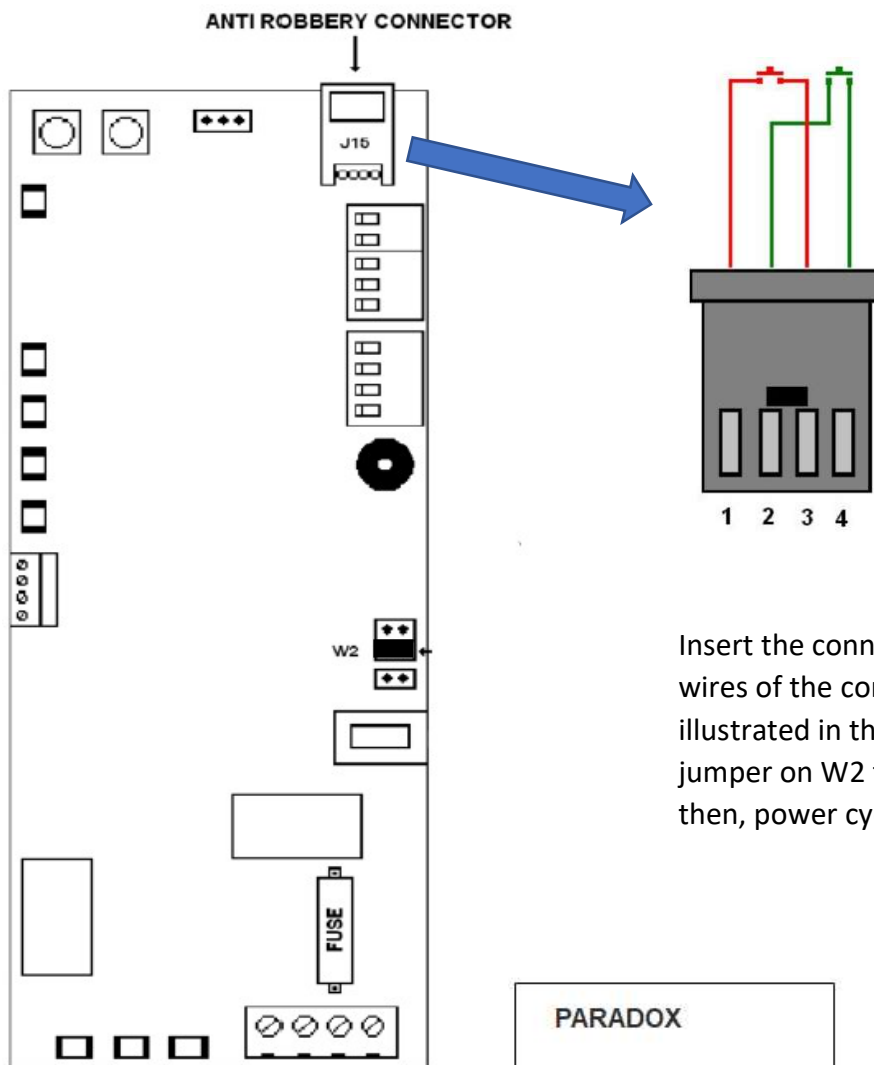
### EXIT DELAY (20 secs)

Section [3108], enter [020]

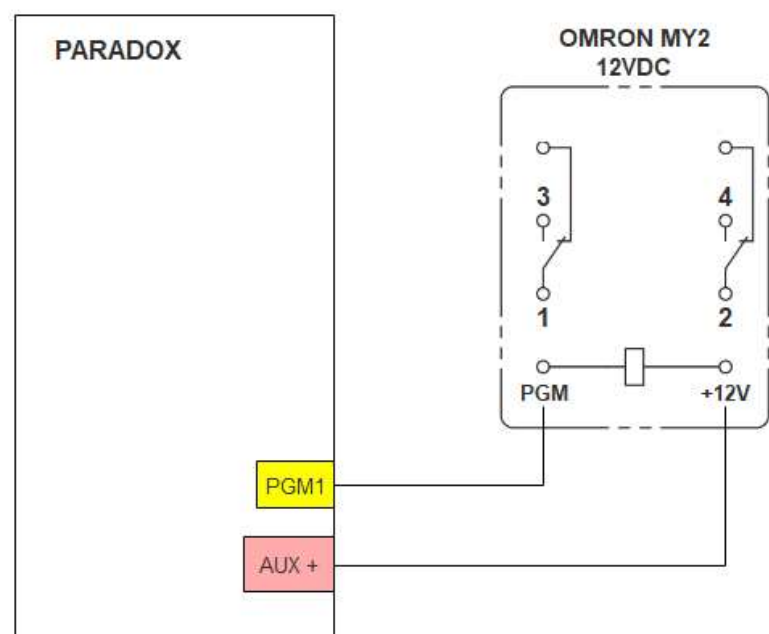
## 5.2 RF Output Wiring to Panel Zone inputs (FAST 03 PRO PLUS ONLY)



### 5.3 Anti-robbery



Insert the connector into pin J15. Connect the wires of the connector to the MY2 relay as illustrated in the circuit diagram below. Close jumper on W2 to enable anti-robbery trigger, then, power cycle the RF device.



### SP/MG Programming:

PGM activated for 2 seconds once alarm is triggered.

#### PGM 1

Section 220, enter [02 06 99]

Section 221, enter [00 00 00]

Section 261, off [1]

Section 281, enter [002]

#### PGM2

Section 222, enter [02 06 99]

Section 223, enter [00 00 00]

Section 26, off [1]

Section 282, enter [002]

### EVO Programming

PGM activated for 2 seconds once alarm is triggered.

#### PGM1

Section [0901], enter (Panel S/N) enter (001)

1. enter [024]

2. enter [255]

3. enter [000]

4. enter [000]

5. enter [000]

6. enter [000]

7. enter [000]

8. enter [000]

9. enter [002]; Timer

10. turn of all; PGM options

#### PGM2

Section [0902], enter (Panel S/N) enter (002)

1. enter [024]

2. enter [255]

3. enter [000]

4. enter [000]

5. enter [000]

6. enter [000]

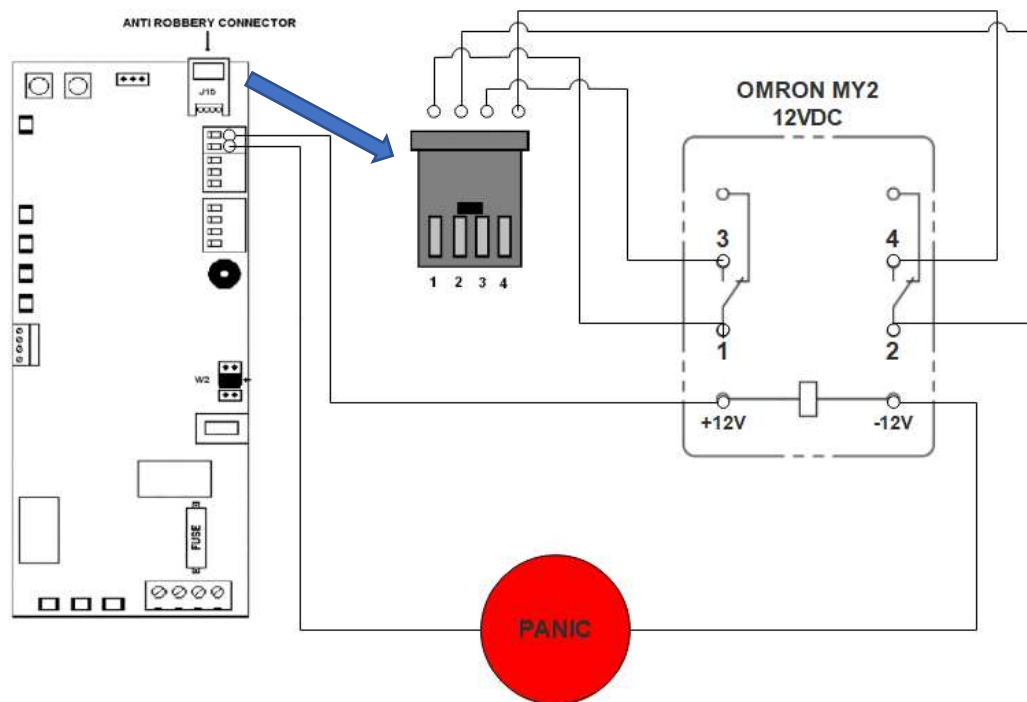
7. enter [000]

8. enter [000]

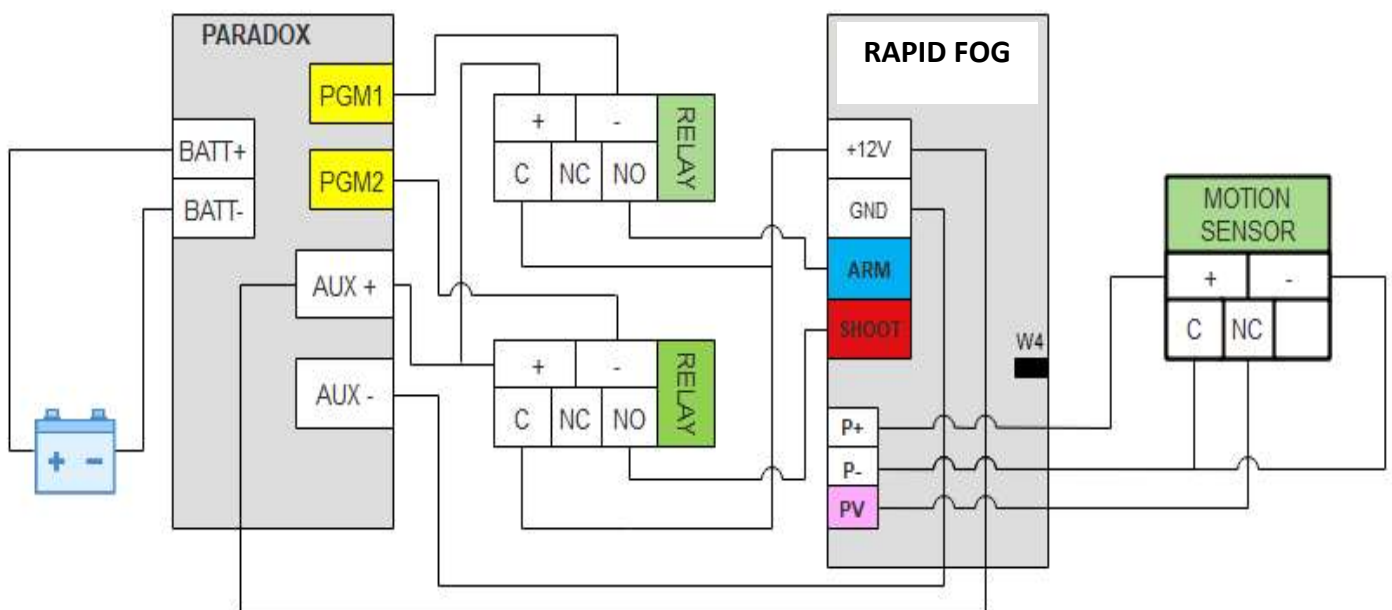
9. enter [002]; Timer

10. turn of all; PGM options

## 6) Anti-robbery Function (Stand-alone)



## 7) Validation Input



## 8) Maintenance

RF 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:

- The charged cylinders have a (predetermined duration) of 3 years' time limit.
- The expiry date is printed at the top of the cylinder.
- Annually verify the functioning of the cylinder plates.
- Check the air tightness of the circuit and the switch functioning.
- The efficiency of the batteries is crucial to guarantee the operation
- We suggest to send back to your reseller the cylinders that are expired but not empty
- Empty cylinders, in aluminium or steel, can be recycled as a common can.

### **UP / DOWN CYLINDER PLATES – SCROLLING TEST**

The scrolling check of the cylinder plate is performed by activating the motors without cylinder, but with batteries necessarily connected, with the following sequence:

- 1) Close the jumper W3 thus putting the card in “service mode”
- 2) Make sure that the jumper P3 is in the right-side position
- 3) Hold down the button S1,  
the buzzer beeps and then this sequence begins:
  - Motor 1 down
  - Motor 1 up
  - Release the button S1 (in this situation you can hear the noise of the Nozzle tamper pump and a slight smoke may exit from the nozzle)
- 4) Remove the jumper W3
- 5) With a slight finger pressure on the cylinder plate of the motor, push the button S1 again

If you only want to lower a cylinder plate after an activation without the cylinder occurred, simply perform step number 5.

## 9) Defect/Fault Indication and possible solution

DEFECT FOUND	POSSIBLE CAUSE	POSSIBLE SOLUTION
When you connect the machine, you hear a relay clicking cyclically	No fault	When the machine is cold or just has emitted fog, until the exchanger has reached the working temperature, a relay is activated with the triac to decrease consumption.
When you connect the generator, you don't hear the clicking relay	As soon as the PCB is switched on, the microprocessor makes a diagnostic check	For the duration of the test, even GREEN LED is flashing, the exchanger is not activated, Wait for 2 minutes.
	GREEN LED switched on and fix	The heating exchanger has reached the temperature, so the relay is not activated anymore, but just occasionally.
	GREEN LED switched off	There is no 240V power supply, check mains on the input terminals for power supply and wait for 2 minutes.
When you arm the machine, you hear an internal buzz like a motor	The compressor is checking if there are any obstructions in the circuit for fog emission	When the machine is armed, the compressor will monitor the nozzle for 15 minutes. After this time, it will deactivate automatically: if the fogging system is disarmed, the compressor will resume monitoring until it reaches 15 minutes. If the machine is disarmed and then armed again, the count will start again from zero.
When you arm the fogging system, a little fog flow goes out from the nozzle even if the machine has never shot before	During testing phase in the factory, quality of fog produced in all machines are tested. Hence, a little quantity of the fog liquid still remains in the ducts	This emission occurs just at first activation, it will decrease visibly with any activation, until disappearing completely. After an eventual disassembly and reinstallation or after the transport of the machine, with the first activations a little flow of fog can occur again.

The 3 frontal LED are flashing and the buzzer emits 1 beep per minute	The tension on +12V input is too low or too high	Check the external power supply of the alarm unit
The buzzer emits 2 beeps per minute	Low batteries but possible shot	Replace batteries
The buzzer emits 3 beeps per minute	Low batteries but possible shot	Replace batteries
The buzzer emits 10 continuous beeps per minute	Batteries not present	Insert batteries
	False contact in the battery case	Readjust batteries
	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. If all the above has been done, press the reset button and wait for a while. Firmware performs battery status check every 5 minutes.	
The machine is armed (BLUE LED on) but doesn't shoot	The front RED LED is on	Cylinder reset has not been done. Press the reset button
		Cylinder is empty. Replace new cylinder
	The front GREEN LED flashes	The heat exchanger has not yet reached the minimum temperature of shooting, wait for the led to stop flashing.
	The machine doesn't shoot immediately after arming	For safety reasons and to avoid false fog emissions during power on, when the machine is armed, it becomes operative only after 20 seconds. After this time, the emission is instantaneous.
	Wiring error	Verify that the alarm, once activated has tension on connectors of at least 12V between GND + SHOOT.
BLUE LED is flashing	Overvoltage power line (240V)	Check if there is a sufficient ventilation around the machine.
The buzzer emits a continuous sound	Disturbance/interference or potential differences between devices	In the case of strong interference (lightning), a thermocouple reading error can occur. Make a reset.
BLUE and RED LEDs are flashing alternatively		In large size plants or with more than one fogging system connected with the same central, in rare situations, it may occur that



		there are potential differences between the equipment's and it could be necessary to uncouple.
	Error in the thermal loop	Possible fault of: thermocouple, resistance or fuse cable. Do not try to repair. Contact supplier for assistance.
Impossible to arm the machine. BLUE LED doesn't switch on	Wiring error	Check on the terminal with a tester that when the alarm system is turned on there is a minimum voltage of 11V between GND + ARM.
Cannot arm, BLUE LED doesn't light up	Wiring error	Test the terminal if there is a minimum voltage of 11V between GND + ARM when the anti-theft system is activated.
When you press the reset cylinder button, you don't hear the sound of the buzzer, the frontal LEDs are flashing but the RED LED does not reset	The Jumper P3 is in the 'SET' position	The shooting time is reset to zero. Set the shoot time again and move the Jumper P3 to the right-side position, then press the cylinder reset button.
The cylinder does not enter	The plate is raised	Refer to the scrolling test section.
The cylinder cannot be removed	The cylinder is stuck in the valve	Pressure down gently, and then pull the cylinder out
Setting the shooting time, the buzzer does not sound and the LEDs doesn't flash	The Jumper P3 is in the 'RESET' position (right-side position)	Move the Jumper P3 to the left-side position ('SET') to set the shooting time.