

# Securitex Industrial MD-18 Man down Alarm System

## User's Manual

Thank you for purchasing the Securitex Man down Alarm system. Before using the system please read this manual carefully. This manual is to be kept in a place that can be accessed by the user.



## **GENERAL**

This system comprises the Man Down unit (MD-18) and Base unit (MD-18B); it is available for an individual and up to 8 users.

The Base unit is designed to be carried for off-site application when the lone worker needs to move to a remote location instead of working in the fixed factory premises. The Base unit has a built-in buzzer when activated. It also has relay output (NO / NC) for activating the Securitex WT-1011RC GSM controller to send out distress message to the Man Down Monitoring Administrator Officer. Securitex Man Down unit is very simple to operate with virtually no maintenance required other than ensuring that the system battery is charged and the Operation Green LED is blinking. This system will work inside building or in open yard area; it is safe, reliable and easy to use. Typical effective range outdoor is up to 40 metres and indoor up to 30 metres through walls.

It is perfect for nurses, prison guards, social workers, postal workers, power plant workers, parking wardens, elevator engineers, doctors, technicians, sailors, boiler operator and even hotel staff and front counter personnel and all other lone worker in underground, outdoor and field or at night.

## MAN DOWN UNIT

\*1. There is a power switch on the left side of the MD-18

\*2. Every time the Man Down unit is switched on, the 7 segment LED display will display from digit 9 to 1, then from 9 to 1 as self-test to confirm the Man Down alarm unit is operating correctly. Before the 7 segment LED display goes out, it will blink 5 times to show the code of this Man Down unit.

\*3 Please note that the 7 segment LED display is invert. This is for the user convenience when he/she is look down at the Man Down unit that is attached to the waist.

\*4. This man down unit has 4 kinds of protection for selection.

1. **1. Tilt detection**
2. **2. NO Motion**
3. **3. Tilt + NO Motion detection**
4. **Panic Button can be activated from the Yellow Button. (Press for 3 seconds)**

No.	Item
1	On/Off switch
2	Flash light
3	Panic button (YELLOW button)
4	Blink – Power on Static light – Timing count Put out – Alarm triggered
5	7 segment LED display



### **TILT DETECTION**

If the Man Down unit leans over 45 degree for 30 seconds (i.e. the person carrying it is attacked or inhales toxic fume and fall to the floor), the Man Down unit alarm will beep for 30 seconds as pre-alarm to warn the wearer that an alarm is about to be activated. When the wearer is incapacitated due to illness or injury and ignores the pre-alarm by up righting the unit, a radio alarm transmission is sent and the alarm will go off fully accompanied by flashing LED to attract attention. The alarm sound and flashing LED will not stop until the battery is exhausted or the sufferer presses and hold the panic button over 2 seconds to stop the alarm and put out the flashing LED.

### **NO MOTION DETECTION**

If the Man Down unit keeps motionless for over 30 seconds (i.e. the person sits or stands or lies without moving), the man down unit alarm will beep for 25 seconds as pre-alarm to warn the wearer that an alarm is about to be activated. When the wearer is incapacitated due to illness or injury and ignores the pre-alarm, a radio alarm transmission will be sent and the alarm will go off fully accompanied by flashing LED to attract attention.

The alarm sounding and flashing LED will not stop until the battery is exhausted or the sufferer presses and holds the panic button for over 2 seconds to stop the alarm and put out the flashing LED.

### **TILT & NO MOTION DETECTION**

If the Man Down unit leans over 45 degree and NOT MOVING for 30 seconds (i.e. the person carrying it is attacked or inhales toxic fumes and falls to the floor and become unconscious), the Man Down unit alarm will beep for 25 seconds as pre-alarm to warn the wearer that an alarm is about to be activated. When the wearer is incapacitated due to illness or injury and ignores the pre-alarm by up righting the unit, a radio alarm transmission ~~is~~ will be sent and the alarm will go off fully accompanied by flashing LED to attract attention. The alarm sounding and flashing LED will not stop until the battery is exhausted or the sufferer presses and holds the panic button for over 2 seconds to stop the alarm and put out the flashing LED.

### **PRE-ALARM**

The pre-alarm is helpful to avoid false alarms for the activities that require stooping down such as tying one's shoe laces or fixing things. The wearer can press once to terminate a miss pre-alarm.

### **ALARM ON OTHER MEMBER**

The radio alarm transmission will be detected and latched by the Man Down unit located on other member or on site (such as in a security lodge, reception or central control room). There is an audible warning or vibration and the sufferer's unit is identified by a numbered light. The audible alarm and the light on other member unit will stay illuminating for 30 seconds. Other member can press their panic button once to stop the audible alarm. But the numbered light will stay illuminating for 30 seconds.

### **PANIC ALARM**

If the wearer is in emergency condition, the Man Down unit has a panic button (YELLOW) in the front side. Press and hold the panic button over 2 seconds, the Man Down unit will send an instant radio alarm signal to call help. The alarm will go off fully accompanied by flashing LED to attract attentions.

### **CODE INDICATION**

The corresponding number of the sufferer will appear on other Man Down unit to identify the member, accompanied by audible alarm. If more than one member is in trouble, the other members of the same group will receive the alarm signals from the sufferers and display their corresponding numbers from the first sufferer shifting in order per 6 seconds. The code of the first sufferer will stay for 30 seconds and then start to display the code of the second and later sufferers in shift.

### **SET WARNING MODE**

The Man Down unit has three kinds of warning mode:

1. **1. Alarm sound**
2. **2. Vibration**
3. **3. Alarm sound and vibration**

First press and hold the panic button (YELLOW Button) then switch on the Man Down unit, the Man Down unit will beep once to confirm that the Man Down unit has entered warning mode setting. Release the panic button and then press the panic button once, the warning mode is alarm sound. Press the panic button again and the warning mode will change to vibration. Press the panic button again and the warning mode will change to dual warning: alarm sound + vibration.

Select preferred warning mode and switch off to complete the warning mode setting.

**BATTERY**

The Man Down unit uses rechargeable battery AAA/UM-4 x 2 pieces. Always install the battery by matching the correct + and - poles as indicated (see fig.). Wrong installation will cause damage to the circuit. When batteries of Man Down unit run down, the LED in front side will light up in red. Each Man Down unit comes with a battery charger. It takes about 6 hours ~~for~~ to fully charge the batteries.

If the rechargeable battery of Man Down unit runs down, it can be replaced with AAA/UM-4 dry cell battery as an emergency countermeasure, but never connect the battery charger to charge the dry cell battery. The producer and marketing group do not take any responsibility for the damage caused by charging dry battery.



**8-PIN DIP Switch**

There is an 8-pin DIP switch in the left upper side of rear cover for setting the group, code and protection of Man Down unit. From left to right, the first 5 pins are code setting, the 6<sup>th</sup> pin is group setting and the 7th and 8th pins are protection setting.

\*Any change of the DIP switch setting will take effect after power reset, switch off and then switch on.

Pin 1 – 5 = Code Pin 6 = Group Pin 7 – 8 = Protection

1	2	3	4	5	6	7	8

**Code setting**

Available code: 1 – 9, 11 – 19, total 18 codes (members), without 0 (zero) and 10.

Code	Binary	Pin setting
01	10000	
02	01000	
03	11000	
04	00100	
05	10100	
06	01100	
07	11100	
08	00010	
09	10010	

Code	Binary	Pin setting
11	01010	
12	11010	
13	00110	
14	10110	
15	01110	
16	11110	
17	00001	
18	10001	
19	01001	

**Group setting**

This system can set for 2 groups by Pin 6.

Group	Binary	Pin setting
1	00	
2	01	

### Protection setting

This system has 3 kinds of function for selection, set by Pin 7 - 8.

Protection	Binary	Function	Pin setting
1	01	Tilt	
2	10	NO Motion	
3	00	Tilt + NO Motion	
	11		



### BASE UNIT

- 1 ON/OFF Turning ON/OFF of the base unit (MD18B) require the Monitoring Administrator to call the Securitex WT-1011RC or can send an SMS to the unit to ON/OFF. When the Unit is OFF the Operation green LED will be OFF. When the unit is turned ON back the Operation green LED will light up and start blinking.
- 2 ON/OFF alert to ON the Buzzer alert, just place the magnetic sensor on the Alarm ON/OFF sensor location.
- 3 ANTENNA can be place up right or horizontally.
- 4 RESET Once the Lone Worker unit is activated the Operation Green LED will stay ON and all the Monitoring Administrator will receive a “man down activation alert” on their mobile phone. To RESET the system just place the RESET Magnet on the RESET sensor indicated and the Operation Green LED will blink again. All the Monitoring Administrator will receive a RESET alert SMS on their mobile phone.

### 5 CHARGING PORT & PROGRAMMING PORT.

This Lone Worker unit c/w 2 built-in rechargeable batteries, one 12VDC for operation of the Lone Worker base station MD-18B and to power the Securitex WT-1011RC built-in GSM controller, the other battery 2500mAh 11V is for standby to power the Securitex WT-1011RC when the main battery is dead.

There is an 8 pin female connector on the Lone Worker unit. This connector is use as charging port for the internal rechargeable batteries and also an RS485 system programming Port.

There is an 8 pin male connector c/w a short cable connected to an RJ45 with 12VDC adapter charging input.

The unit will be supply with a 12VDC 1000 mA power adapter for charging of the system.

Note:

The base station rechargeable battery built-in can last for 8 hrs on standby mode. When the battery runs down, the battery low indication LED in RED will turn ON. Connect the switching power adaptor to the charging port and the battery will start charging, during charging the base unit can still be used continuously and at the same time. It takes about 8 hours to fully charge the battery of the base unit or when then Orange LED light ON.

### NOTICE OF USE

1. If you are not going to use the Man Down unit for a long time, remove the batteries to avoid damage caused by corrosion from battery leakage.
2. **If you use dry cell batteries in Man Down unit never connects the battery charger to charge the dry battery.**
3. Avoid water, impact or drop.
4. Do not store this device in an excessively hot place.
5. Clean this device by wiping gently with a soft cloth, never use solvent.

### EFFECTIVE RANGE & INTERFERENCE

1. When there are people or metal objects between the Man Down unit, the radio waves might be absorbed or reflected, so the effective range will become shorter or longer than usual.
2. The effective range will become shorter if there is metal object or metal wall around the Man Down unit.
3. The effective range will become shorter if the Man Down unit is very close to ground or concrete wall.
4. The effective range will become shorter than usual when the battery runs down.
5. The effective range will become longer when used in a narrow alley, gallery.
6. While near the big antenna of a radio station, a telephone exchange, airport, or within station, bus or car, this system might give false alarm even inside the effective range.

## SPECIFICATIONS

### MD-18

<b>Power</b>	AAA/UM-4 rechargeable battery x 2
<b>Battery duration</b>	24 hours for continuous use after full charged
<b>Battery charging time</b>	About 6 hours
<b>Weight</b>	80 g (including battery)
<b>Size</b>	L 9.3 x W 5.6 x T 1.7cm
<b>Effective range</b>	Outdoor up to 40 meters radius. Indoor up to 30 meters through walls.
<b>Alarm sound</b>	95dB
<b>Receiving sensitivity</b>	- 80dBm
<b>Output power</b>	< 10mW (10 dBm)
<b>Assembly</b>	Singapore

\* Specification may change without notice.

### Base Unit MD-18B

<b>Power</b>	12V 1.2A rechargeable battery
<b>Power</b>	12V 1A Switching power adaptor
<b>Battery duration</b>	8 hrs of continuous use after full charged
<b>Battery charging time</b>	About 8 hours
<b>Weight</b>	2.2 kgs (including battery)
<b>Size</b>	Base unit: L 21.5 x W 15 x H 13.5cm 7 segment LED display: 12cm high
<b>Effective range</b>	Outdoor up to 40 metres radius indoor up to 30 metres through walls.
<b>Receiving sensitivity</b>	- 80dBm
<b>Alarm output</b>	Relay, NO - NC
<b>Assembly</b>	Singapore

\* Specification may change without notice.

### WARNING

Use this device only as an auxiliary, supplemental help or aid to assist you in knowing the user is in need of assistant/help. Performance of this Radio frequency (RF) product will be affected by the circumstance of use. The producer and marketing group accepts no liability for any loss or damage by malfunction or misuse.

### Important Note:

This product does not have Intrinsic Safety (IS) approval, thus it is not allowed to be used in areas where dangerous concentrations of flammable gases or dust are found in applications such as petrochemical refineries and mines. Do not bring this product to an area that is classified as explosion proof zone. If in doubt please contact the owner where this product is to be use.

### User of the Securitex lone worker unit is to note:

User need to ensure that their MD-18 transmitter radio frequency can be received by the MD-18B Base station unit. User must do a physical test of the device when they move from one site to another. This system is also integrated to the GSM controller built-in. When the MD-18 is activated, the MD-18B will transfer the signal to the GSM controller which will sent out a preset SMS to the monitoring administrator.

### Monitoring Administrator note:

Monitoring administrator must ensure that the USER under his / her care follows very strict operating instruction when using the product.

### User and Monitoring Administrator note:

User and Monitoring Administrator is aware that they cannot rely fully and solely on this product to ensure their safety and security, such they can only use this product as an auxiliary, supplemental help or aid to assist them in knowing the user is in need of assistant / help and provide appropriate assistant.

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