

# SPD-1000

Wireless Magnetic Displacement Detector

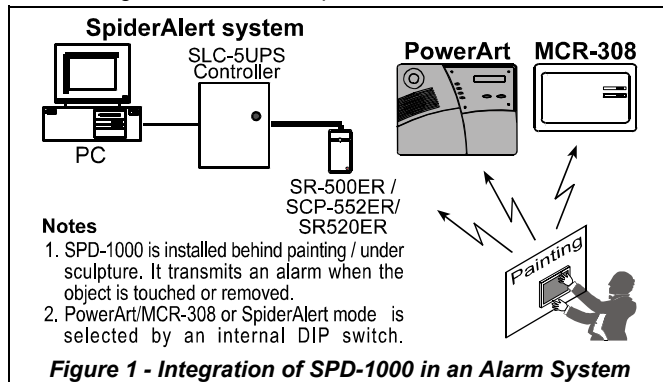


Visonic

Installation Instructions

## 1. INTRODUCTION

SPD-1000 is a fully supervised wireless detector, designed for protection of paintings, sculptures and other artwork, in museums, galleries, churches, private artwork collections, etc.

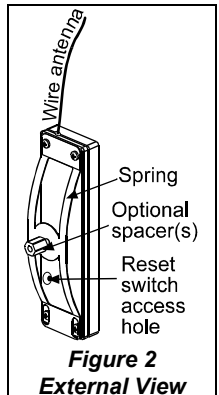


When someone tries to touch or remove the secured object, to which the detector is attached, an identifiable alarm signal is transmitted to alert security personnel. Identifiable signals include: low battery voltage alert, low severity alarm (slight touch) and high severity alarm (repetitive touch, strong touch or removal).

In addition, the detector periodically sends supervision signal as a serviceability report. With PowerArt high level, sensitivity can be extended.

The detector has 3 modes:

- "Sleep" - for the detector transport or long term storage, without causing an alarm. In this mode the current consumption is very low.
- "Installation" - for sensor's spring active range adjustment and for teaching the SpiderAlert / PowerArt system the detector's identity.
- "Operation".



All mode changes and alarms are aurally indicated by an integral buzzer.

The SPD-1000 has tracking mode (for SpiderAlert only) that enables to track the secured object's location up to 10 minutes after its removal (with SpiderAlert receivers deployed within the site). This option is possible if the detector is attached to the secured object.

For a large painting, several SPD-1000 units can be used.

## 2. SPECIFICATIONS

**Movement Detection Sensitivity:** 0.1 mm

**Transmission Frequency (MHz):** 315, 433.92, 868.95 or other frequency per local requirement in the country of use.

**Compatible Receivers:** PowerArt / MCR-308, SpiderAlert SR-500ER / SR-520ER.

**Overall Message Length:** 36 bits, including 24-bit identification code, pulse width modulation.

**Supervision Transmission:** Every 60 min. (USA) / 15 min. (Europe)

**Power Source:** Two 3V/220 mAh Lithium batteries, GP CR-2032, or equivalent.

**Current Consumption:** 8  $\mu$ A (STBY), 8 mA (transmission)

**Battery Life:** 3 years under normal installation conditions

**Battery Supervision:** Automatic transmission of battery condition data as part of any status report.

**Tracking Transmission:** Every 30 sec., while the secured object is being moved from its original place, up to 10 min. after last movement.

**Operating Temperatures:** 0°C to 50°C (32°F to 122°F)

**Dimensions (HxWxD):** 96 x 28 x 22 mm (3-13/16 x 1-1/8 x 7/8 in.)

**Weight (with battery):** 34.8 g (1.2 oz)

**Color:** Housing - white, spring - nickel

**Compliance with Standards:** FCC part 15, IC:1467102181.

The term "IC" before the certification/registration number only signifies that the Industry Canada technical specifications were met.

## 3. INSTALLATION

### 3.1 Installation Options

**Artwork Mounting Options**

Option No.	1	2	3
	Mounted with 2 screws	Mounted with wire and screw	Mounted with wire, screws and support
<b>Description and Illustration (side view)</b>			
<b>Detection Sensitivity</b>	Low	Medium	High
<b>Removal detection</b>	Yes	Yes	Yes
<b>Canvas cutting detection</b>	Yes, if mounted behind canvas	Yes if painting is small and light	Yes if painting is small and light

**Notes**

- SPD-1000 is attached to the mounting surface by double-sided adhesive tape or by a bracket (see fig. 4). Both are supplied with the detector.
- The detector's wire antenna must be straight and far from metallic elements.

**Figure 3 - Installation Possibilities**

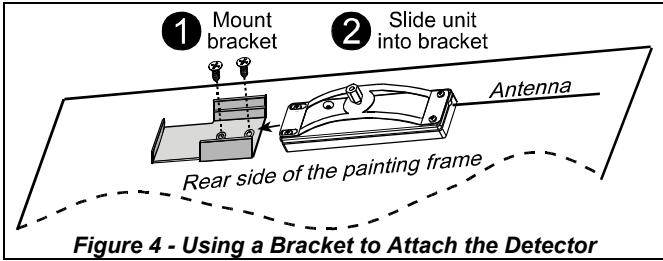


Figure 4 - Using a Bracket to Attach the Detector

### 3.2 Setting the SMD Switches

Table 1 - SMD Switches Functions

Switch	Function	Pos.	Selected Option	Default
SW. 1	Sensitivity & tracking	ON	Spider: Tracking enabled PowerArt: High sensitivity	ON
		OFF	Spider: Tracking disabled PowerArt: Low Sensitivity	
SW. 2	Buzzer	ON	Enabled	ON
		OFF	Disabled	
SW. 3	Supervision	ON	USA (60 Min.)	ON
		OFF	Europe (15 Min.)	
SW. 4	Mode	ON	SpiderAlert	ON
		OFF	PowerArt or MCR-308	

### 3.3 Five Step Installation

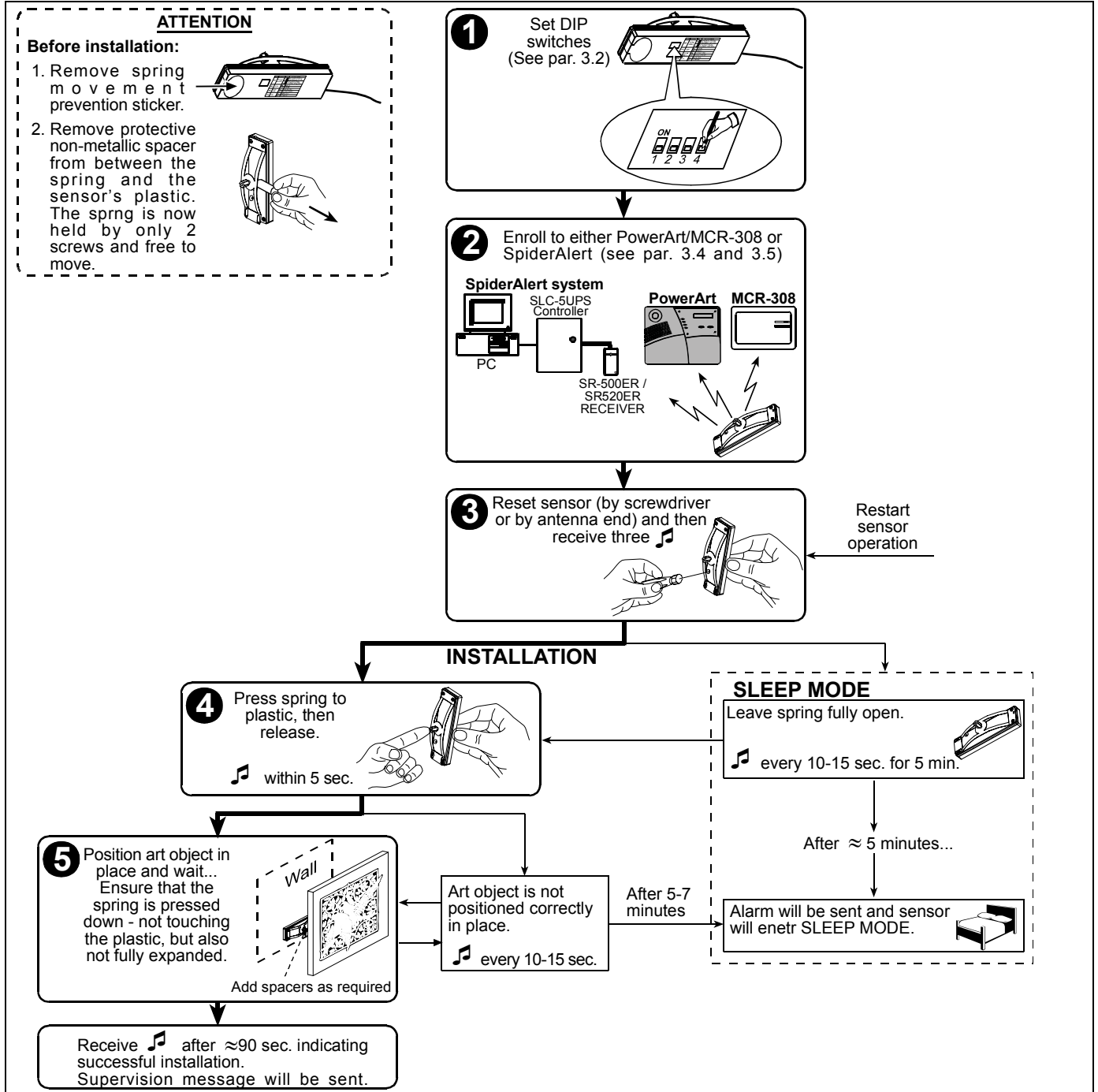


Figure 5 - Five step Installation

### 3.4 Enrolling to PowerArt / MCR-308

Teach PowerArt / MCR-308 to identify SPD-1000:

- A. Teach PowerArt (see par. 3.2G in PowerArt Prog. Guide) or MCR-308 (see par. 3.5 in MCR-308 installation instructions). When instructed to transmit, initiate SPD-1000 low severity alarm transmission by momentarily pressing the Reset switch (see figure 5, step 3), or by moving the secured object.

*Note: According to this signal, the PowerArt automatically learns to identify high severity alarm, low severity alarm, low battery and supervision messages. According to this signal the MCR-308 learns to identify low severity alarm only.*

To teach the MCR-308 the high severity alarm, create the alarm after the detector has been stabilized, by strong movement / removal of the secured object. For high and low severity alarms, you need 2 different zones in MCR-308.

- B. Verify that the teaching is successful, according to the previously mentioned documents.

### 3.5 Teaching the SpiderAlert System

Teach SpiderAlert system to identify SPD-1000 transmissions:

- A. In SpiderAlert software, click File/Transmitters/Museum/Add.  
 B. Initiate low severity alarm transmission by momentarily pressing Reset switch (see figure 5, step 3).  
 C. The detector's ID number will be displayed in the yellow box.  
 D. Press the "<<" button to move the ID number from the yellow (temporary) box to the "ID" box.  
 E. In the Location box, type the secured object's name (i.e. Mona Liza picture).  
 F. In Holder Group box, type a desired name for the museum detectors group for whom the event handling will be identical.  
 G. Press the [...] button, to display the Museum Group screen.  
 H. Select the appropriate museum detectors group.  
 I. Press Edit button, define (for the operator) the handling description for every detector's event and press OK.

### 3.6 Operation

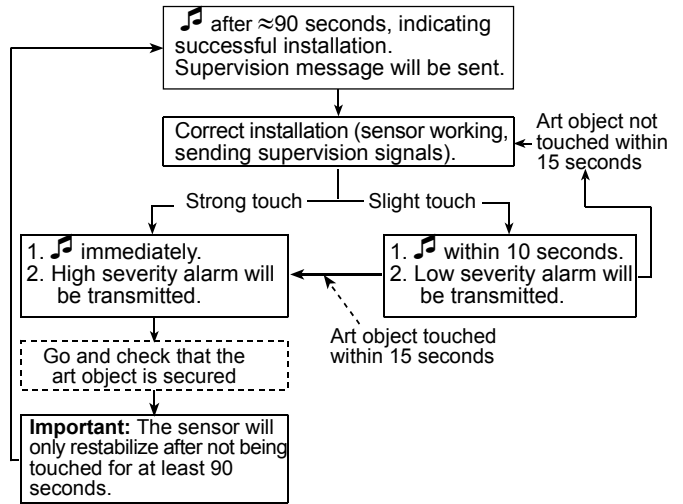


Figure 6 - Operation

After the high severity alarm (repetitive touch, strong touch or removal) has been transmitted, if the spring returns to the original position (fully open – not depressed) as it was before preparing it for use, then the SPD-1000 will behave as follows:

**SpiderAlert:** A single beep will be sounded every 15 seconds and a high severity alarm will be transmitted every 30 seconds. This will continue for 10 minutes. After this, a single beep will be sounded every 15 seconds and a high severity alarm will be transmitted every 2 minutes for additional 5-7 minutes. At the end of these 10 minutes, the sensor will enter the "Sleep" mode.

**PowerArt / MCR-308:** A single beep will be sounded every 15 seconds, and a high severity alarm will be transmitted every 2 minutes. This will continue for 10 minutes after which the sensor will enter the "Sleep" mode.

## 4. BATTERIES REPLACEMENT

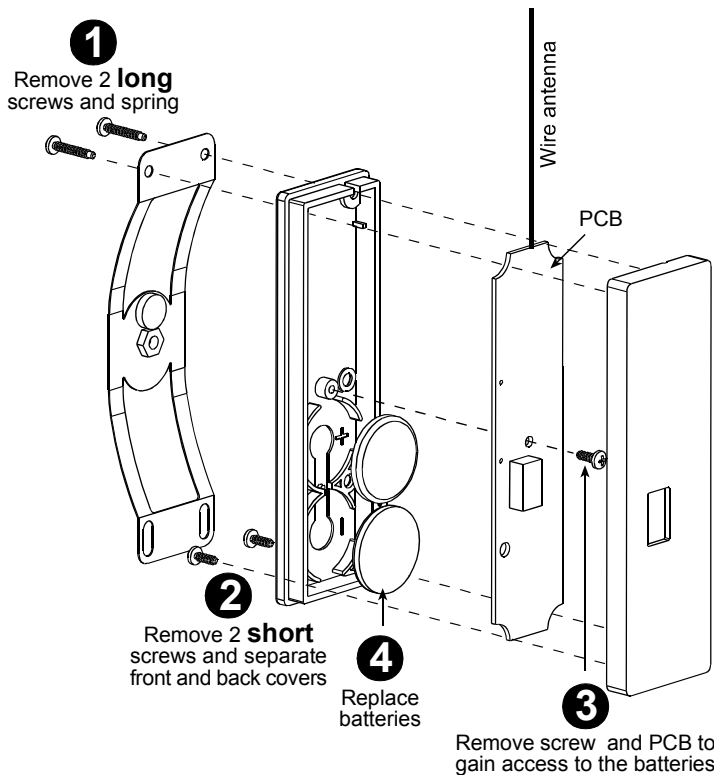


Figure 7 – Batteries Replacement

### Attention

When reassembling the SPD-1000, verify that the two **short** screws (see step 2) are located as shown in the drawing (not near the antenna) and that these screws do not fasten the spring to the plastic (to enable free spring movement).

### **Compliance with Standards**

This device complies with FCC Rules Part 15. Operation is subject to two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may be received or that may cause undesired 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

The 315 MHz is for USA & Canada - not allowed in any EU member state. The 433.92 MHz has no restriction 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 and service for a period of twelve months 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. To exercise the warranty the product must be returned to the Manufacturer freight prepaid and insured.

**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 directly, indirectly, 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 Product may not be compromised and/or circumvented, or that the Product 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. User understands that a properly installed and maintained alarm may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.

**The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function.** However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, the Manufacturer's maximum liability shall not in any case exceed the purchase price of the Product, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.

**Warning:** The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic 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.

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