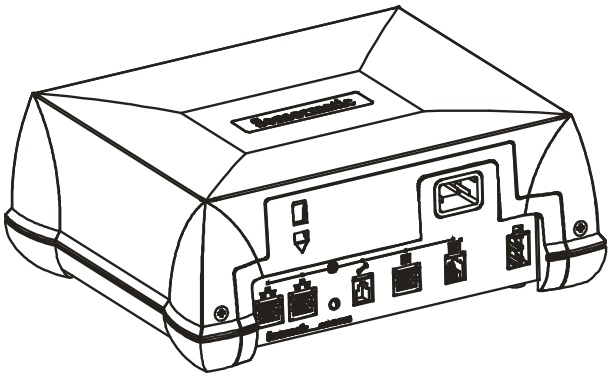
Sensormatic®

Preliminary

ZBAMB9010-IPS EAS Label Deactivation Controller

Installation Guide

TYPE: AMB-9010-IPS



If you need assistance…

For product bulletins, the most recent updates to this document, or to contact a technical support specialist, visit *www.sensormatic.com/support*.

About this Guide

This guide only covers hardware installation. For setup information, see the setup guide for the deactivation pad or coil being connected.

About the Product

European Regulatory Restriction: None.

Declaration of Conformity: If this product was installed in a European Union or European Free Trade Association member state, give the Declaration of Conformity included with this product to the manager or user. By law, this information must be provided to the user.

Intended Use: Only install this device as described in this guide.

See page 4 for additional **WARNINGS** and **CAUTIONS**.

Product Description

The ZBAMB9010-IPS deactivation controller connects to a Sensormatic® low inductance deactivation pad or coil to deactivate Ultra•Strip® low energy security labels.

A Status LED on the deactivator is solid green when power is applied.

Installation Options

- On the countertop as described in this guide.
- ZBSMP-B1 Under-Counter Mounting Bracket. See installation guide 8200-0054-03.
- ZPSTP-RA Remote Alarm Module See installation guide 8200-0838-01.

Mechanical Specifications

Dimensions (L x W x H)	26.2cm (10.3in) x 22.1cm (8.7in) x 10.1cm (4in)
Weight	2.5kg (5.5 lbs)
Power cable length	18.3m (6ft)

Deactivation pads and coils used with the controller:

Deactivation Pad	Consists of one or two coils inside a horizontal housing
Deactivation Coil	A vertical or horizontal coil in a standalone housing or inside a barcode scanner

Note: This controller has been approved for use with high inductance ScanMax Pro deactivation pads, although not presently offered.

High Inductance Pads (ScanMax Pro)

Pad	Tx Power
ZBSMPLP (LP Pro)	Med
ZBSMPPP (PowerPad Pro)	Med
ZBSMPSP (SlimPad Pro)	Med
ZBSMPIP (IP Pro)	Med
ZBSMPCP (CompactPad Pro)	Med

Scanner Integrated High Inductance Coils

Coil	Tx Power
ZBSMPIS (ScanMax IS)	Med
ZBSMPNS2 (ScanMax NS2)	Med
ZBSMPHS (ScanMax HS)	Med
ZBAMB5110H, ZBAMB5110V	Med
ZBAMB5220A	High
ZBAMB5278A	Med

Low Inductance Pads / Coils

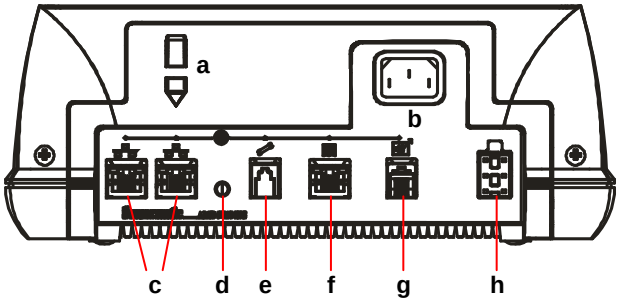
Coil / Pad	Tx Power
ZBAMB5010A Coil	Low
ZBAMB5011A Pad	Low
ZBAMB5012A Pad	Low
ZBAMB5182A Coils*	Low
ZBAMB5184A Coil*	Low
ZBAMB5185A Coil*	Low
ZBAMB5190A Coil*	Low
ZBAMB5274H, ZBAMB5274V Coils*	Low
ZBAMB5300A Coil*	Low
ZBAMB5780 Coil	Low

* Scanner integrated.

Internal features:

- Automatic deactivation coil detection
- Auto and re-synchronization
- Adjustments to transmit and deactivation fields
- Status LED for power on, communication activity, and basic diagnostics.
- EAS Label type (SR/DR).

Front panel features:



a. Tie wrap slot. A tie wrap helps keep the power cord from being accidentally disconnected from the controller.

b. Power: AC power cord connects here.

c. RS-485 (Network) ports: Two 8-position modular jacks provide RS-485 communication between Sensormatic devices and a POS system.

d. Status LED: Indicates deactivation status. Status indications are mentioned in the setup guides for the controller, pads, and coils.

e. Service port: This 4-position modular jack provides RS-232 communication to a laptop computer for advanced setup and diagnostics.

f. Scanner port: This 8-position modular jack allows a POS system, such as a barcode scanner, to control deactivation and also provides RS-232 communication if required. These ports accept various control voltages (see specs on page 6).

g. Remote port: This 6-position RJ-11 modular jack supports the ZPSTP-RA Remote Alarm Module. Deactivation can be disabled on this port.

h. Pad or coil cable port: The EEPROM cable from the deactivation pad or coil plugs into this port. The preprogrammed EEPROM enables the controller to automatically identify the pad or coil and adjust its parameters accordingly. If the EEPROM is not programmed, controller settings default to the PowerPad Pro deactivation pad.

Setup

A Deactivation Universal Configurator is used to setup the controller. This configurator:

- Installs on a laptop computer that plugs into the SERVICE port.
- Requires Microsoft® Windows® XP operating software on the laptop.

Auto Detection

Auto detection enables the controller to adjust to the deactivation pad or coil in use.

Synchronization

Auto synchronization. Upon power up, the controller automatically syncs its transmission to other nearby EAS systems, after which auto sync is disabled.

Resynchronization. Enabled using the software configurator, resynchronization enables the user to manually force the controller to resync its transmission to other nearby EAS systems.

Wired synchronization. The Universal Sync standard (wired sync) is supported on the NETWORK port as either transmit or receive mode, and is set up in the software configurator.

POS Integration

A dedicated scanner port enables POS integration. POS devices such as barcode scanners can control deactivation when connected to the scanner port.

- POS devices must be programmed with special software.
- Voltage specifications are on page 6.

Networking

A network port provides the ability to enable an external Sensormatic device such as an LDM II to send data to a store's POS network using the RS-485 port for the purpose of remote diagnostics or data mining. The external device must be programmed with special software.

PRECAUTIONS

Please read the following precautions for:

- Safety
- Cleaning
- Device interaction
- Installation.

SAFETY

WARNING!

Hazardous areas.
DO NOT install this product in areas where highly combustible or explosive products are stored or used.

Power considerations.

- Plug this product into an unswitched AC outlet with less than 0.5Vac between neutral and ground. This product is designed to be operated on a power system that includes a protective earth terminal.
- DO NOT connect to UPS power.
- DO NOT plug or unplug any cable with power on.
- When the cordset is not provided with this product, a cordset certified to the national requirements of the country of installation must be used.

Altitude limitation.
This product is evaluated for use at altitudes up to 3200m (10,500ft).

WARNING—
RISK OF ELECTRIC SHOCK!

No user-serviceable parts.
DO NOT attempt to open this product.

Power cord / cable routing.
Route the power cord and deactivation cables away from mechanisms whose operation may pinch or otherwise damage it. Failure to do so may damage equipment or injure people nearby.

Cleaning

Wipe the housing with a soft cloth moistened (not soaked) with mild detergent. Then wipe off excess.

Keep spills from entering the housing.

DO NOT USE:

- Spray cleaners.
- Ammonia- or chlorine-based cleaning solutions; they may damage the housing or corrode internal parts.
- Abrasives, solvents, or flammable liquids.

Installation

Ventilation. Install the controller in a location that has adequate free space around it and is not likely to be cluttered with debris.

Sidewall mounting. When the controller is mounted to a sidewall of a counter, its cable connectors MUST NOT face down.

Cable reach. Make sure the pad or coil cable can reach the controller. Make sure the power cord and power supply cable once plugged into the controller can reach the AC outlet.

Installation

The controller can be placed on the countertop, or using an optional ZBSMP-B1 mounting bracket attached to the underside of the countertop or sidewall of the counter.

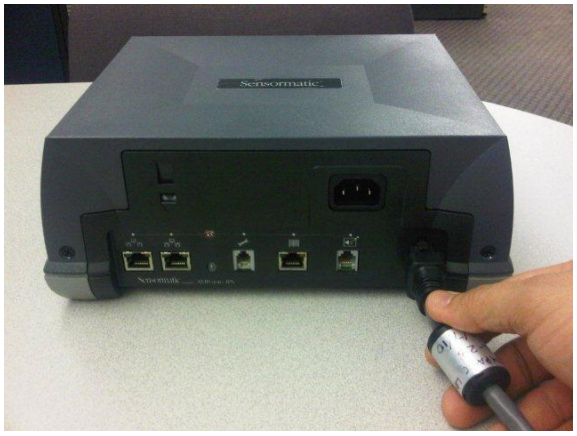
WARNING! When the controller is mounted to a sidewall of a counter, its cable connectors MUST NOT face down.

Procedure

CAUTION: To avoid damaging the controller:

- Perform the next three steps in order. DO NOT reverse the steps.
- DO NOT plug or unplug any cable with power on.

1. Connect the deactivation pad or coil EEPROM cable to the cable port of the controller.



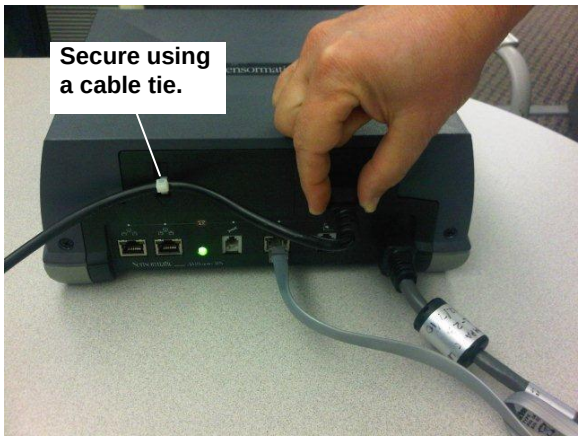
2. Plug the barcode scanner interface cable (if used) into the scanner port of the controller. Plug the ZPSTP-RA Remote Alarm Module cable (if used) into the remote port of the controller.

3. Plug the AC power cord into the power supply and its other end into an unswitched AC outlet having less than 0.5Vac between neutral and ground. The Status LED should be solid green.

   Note: While the controller auto-synchronizes, the Status LED may briefly flash amber. Auto-sync can take up to ten seconds.

If the Status LED is solid red—STOP— return the controller to an authorized repair center.

Leave the coil EEPROM cable in place if removing the controller for service. The EEPROM maintains system settings for the coil location and will automatically update the new controller.



4. Refer to setup instructions for the deactivation coil.

Specifications

Electrical

Voltage input to power supply..... 100–240Vac, 50/60Hz (±5%)

Voltage input from power supply 22.5Vdc

AC line current..... 2.5Arms max.

Scan I/O port:

- Maximum input voltage ..... +25Vdc (±5%)
- Input 1+ and Input 2+:
  - Input voltage..... ±5–12Vdc typical, greater than 12V observing the 32mA maximum
  - Input current ..... 10mA source minimum
  - Minimum pulse duration 100ms
  - Detect out..... Open-collector side of an opto-isolator
  - Maximum pull-up voltage ..... +25Vdc
    This output remains in the open state until label detection occurs. It then shorts to the Detect Common for a minimum of 39ms based on label vicinity to the antenna plus 7 detection windows (5.555 x 7 = 39mS).
  - Detect common ..... Emitter side of the Detect Out opto-isolator. It normally should be tied to D Ground (J8, Pin 6). Maximum current limit: 6.3mA @ Vce < 10V 2mA @ Vce < 0.4V

Environmental

Operating temperature..... 0 to 40°C (32° to 104°F)

Non-operating temperature..... –40° to 70°C (–40° to 158°F)

Relative humidity ..... 0 to 90% non-condensing

Mechanical

Height 10.1cm (4in)

Width 26.2cm (10.3in)

Depth..... 22.1cm (8.7in)

Weight ..... 2.5kg (5.5 lbs)

Connector Inputs/Outputs

Each Network RS485 Port (8 pin modular jack)

Pin 1: RS485 HI (RS-485 Driver A)
Pin 2: RS485 LO (RS-485 Driver B)
Pin 3: Universal Sync A (RS-485 Driver A)
Pin 4: +5V* (Configurator controlled on/off, 250mA max.)
Pin 5: Spare +5V* (Configurator controlled on/off, 250mA max.)
Pin 6: Universal Sync B (RS-485 Driver B)
Pin 7: D Ground
Pin 8: D Ground

*Can be +12V if powered by an LDM II.

Scanner Port (8-pin modular jack)
See specs opposite.

Pin 1: +5Vdc (125mA max.)
Pin 2: Scan In + (390 ohms in series with opto LED anode)
Pin 3: Scan In – (opto LED cathode)
Pin 4: Detect Open Emitter (usually tied to D Ground, pin 6)
Pin 5: Detect Open Collector (0.15-0.4V @ 2mA output low level when Detect OE grounded)
Pin 6: D Ground
Pin 7: RXD POS (RS-232 levels)
Pin 8: TXD POS (RS-232 levels)

Service RS-232 Port (4-pin modular jack)

Note: The Service Port should not be used for POS applications. Use the Scanner Port.

Pin 1: RXD
Pin 2: TXD
Pin 3: D Ground
Pin 4: Not Connected

Remote Port (6-pin Modular Jack)

Pin 1: +22V (75mA max.)
Pin 2: Red LED
Pin 3: Green LED
Pin 4: Audio
Pin 5: Key Switch
Pin 6: P Ground

Antenna Out Ports

Pin 1: X
Pin 2: Y
Pin 3: X Ret
Pin 4: Y Ret
Pin 5: Chassis Ground
Pin 6: EEPROM Signal

Declarations

Regulatory Compliance

Pad/Coil	Regulatory ID
ZBSMPLP	DEAC STP-LP
ZBSMPPP	DEAC STP-PD
ZBSMPCP, ZBSMPCP-F	DEAC STP-CD
ZBSMPSP	DEAC STP-SD
ZBSMPIP	DEAC STP-SD
ZBSMPIS	DEAC STP-JD
ZBSMPNS2	DEAC STP-JD
ZBAMB5010A	AMB-5010
ZBAMB5010A2	AMB-5010
ZBAMB5011A	AMB-5011
ZBAMB5012A	AMB-5012
ZBAMB5110H, ZBAMB5110V	AMB-5110
ZBAMB5182A	AMB-5182
ZBAMB5184A	AMB-5184
ZBAMB5185A	AMB-5185
ZBAMB5190A	AMB-5190
ZBAMB5220A	AMB-5220
ZBAMB5274H, ZBAMB5274V	AMB-5274
ZBAMB5278A	AMB-5278
ZBAMB5300A	AMB-5300
ZBAMB5780	AMB-5780

CE

EMC.....47 CFR, Part 15
EN 55022
EN 55024
ICES-003

Safety (2nd Edit.) .....UL 60950-1
CSA C22.2.60950-1
EN 60950-1

EMC.....47 CFR, Part 15
RSS 210
EN 300 330
EN 301 489

Safety .....UL 60950-1
CSA-C22.2.60950-1
EN 60950-1

Environmental rating:.....IP20

FCC COMPLIANCE: This equipment complies with Part 15 of the FCC rules for intentional radiators and Class A digital devices when installed and used in accordance with the instruction manual. Following these rules provides reasonable protection against harmful interference from equipment operated in a commercial area. This equipment should not be installed in a residential area as it can radiate radio frequency energy that could interfere with radio communications, a situation the user would have to fix at their own expense.

FCC COMPLIANCE: This equipment complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits provide reasonable protection against harmful interference in a commercial or residential installation. This equipment can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following: reorient or relocate the receiving antenna, increase the separation between the equipment and receiver, connect the equipment on a circuit different from that to which the receiver is connected, consult the dealer or an experienced radio/TV technician for help.

EQUIPMENT MODIFICATION CAUTION: Equipment changes or modifications not expressly approved by Sensormatic Electronics, LLC, the party responsible for FCC compliance, could void the user's authority to operate the equipment and could create a hazardous condition.

Other Declarations

WARRANTY DISCLAIMER: Sensormatic Electronics, LLC makes no representation or warranty with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. Further, Sensormatic Electronics, LLC reserves the right to revise this publication and make changes from time to time in the content hereof without obligation of Sensormatic Electronics, LLC to notify any person of such revision or changes.

LIMITED RIGHTS NOTICE: For units of the Department of Defense, all documentation and manuals were developed at private expense and no part of it was developed using Government Funds. The restrictions governing the use and disclosure of technical data marked with this legend are set forth in the definition of “limited rights” in paragraph (a) (15) of the clause of DFARS 252.227.7013. Unpublished - rights reserved under the Copyright Laws of the United States.

TRADEMARK NOTICE: *ScanMax* and *Sensormatic* are registered trademarks of Sensormatic Electronics, LLC. Other product names mentioned herein may be trademarks or registered trademarks of Sensormatic or other companies.