

## Specifications

### Standards and Compliance

The installer must remove or adjust any compliance labelling if he/she selects a non-compliant configuration.

**Intrusion compliance:** EN 50131-1:2007+A1:2009; EN 50131-3:2009; EN 50131-5-3:2005+A1:2008; EN 50131-10:2014; EN 50136-1:2012; BS8243:2010; PD 6662:2010; IA 1501:2015.

**Environmental class:** Class II.

**Alarm transmission:** When using either the built-in SIA-IP function or a plug-on communicator as a single-path solution, this meets EN 50136-1 ATS category SP2. When using the built-in SIA-IP function and a plug-on communicator as a dual path solution, this meets EN 50136-1 ATS category DP1.

### Security

**Security grade:** Grade 2.

**Radio detector combinations:** 16,777,214.

**Radio supervision:** Programmable.

**Access codes:** 4-digit, giving 10,000 combinations.

**Code blocking:** Blocked for 90 secs after 4 incorrect codes in series.

**Proximity tag differs:** 4,294,967,296.

### System limits

Please refer to the Engineering Guide.

### General

**Relative Humidity:** 0 to 93%, non-condensing.

**Operating temp. range:** -10°C to +55°C.

**Dimensions:** 287mm (h) x 203mm (w) x 52mm (d).

**Weight:** 1.2kg (without batteries).

**Case material:** ABS.

**Network port:** Ethernet 10/100Mbps SSL/TLS.

### Radio

**Radio frequency:** 868.6625MHz narrowband.

**Radio power:** 10mW max.

**Transmitter range:** Up to 500m in free space. Also dependent on device type and environment; please refer to the radio device's installation instructions.

### Electrical

This product complies with the requirements of EN50131-6 Type A power supply at Grade 2 and environmental class II.

**Mains power supply:** 85-265VAC, 430-170mA max, 50/60Hz.

**Control unit internal mains fuse:** T1A.

**Control unit power supply:** 13.8VDC, 1.5A max of which 220mA (1 battery used) or 440mA (2 batteries used) is reserved for battery charging and 1060mA/1280mA to power the system.

**Control unit PCB current consumption:** 120mA quiescent. 320mA max (in alarm), excluding external devices, plug-on module and battery charging.

**Plug-on GSM comms module (i-GSM03) current consumption:**

Please refer to the i-GSM03 installation instructions.

**Standby batteries:** 7.4V, 2500mAh, Li-Polymer. Min standby time: 12 hrs (1 battery pack fitted), or 24 hrs (two battery packs fitted). Max recharge time: 24 hrs. Low-battery fault at: <7.2V.

**Battery deep discharge protection at:** 6±0.2V.

**12V aux output:** 13.8VDC +0.1V/-0.4V, 600mA max. (before triggering over-current protection). Fault triggered at <11.5V. 12V aux output is not battery backed up.

**Max p-to-p ripple voltage:** 0.5V.

**OP1/2:** Voltage-free relays, 1A @ 30VDC max.

**OP3/4:** Open-collector transistor, 13.8VDC, 500mA max.

**External DC input:** Nominal 13.8VDC. Minimum 13.0VDC.

Maximum 14.5VDC. Max current 1.5A. Fault triggered at <12.5V.

### SIMPLIFIED EU DECLARATION OF CONFORMITY

Hereby, Eaton Electrical Products Ltd declares that the radio equipment type i-on Style is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: [www.touchpoint-online.com](http://www.touchpoint-online.com)

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## i-on Style Control Unit

## Installation Instructions

The i-on Style control unit provides on-board support for up to 40 radio zones and 4 wired zones. The i-on Style provides a reliable, easy-to-install, wire-free solution for domestic and commercial applications.

**Note:** To prevent false alarms during a power cut, Wired detectors need to be power-free (e.g. door contacts). Powered detectors (e.g. PIRs) need to be powered by an alternative power source as the panel does not provide a 12v output in the event of a power cut.

### Key features

- Provides up to 40 radio and up to 4 wired zones on-board.
- Compatible with all Eaton radio and wired detectors.
- Configurable through on-board keypad, web interface or Downloader.
- Ethernet port for optional use of email, network cameras, web interface, IP alarm communications and other features.
- Micro-SD card slot to enable storage of camera images and firmware/language upgrades.
- Compatible with Eaton radio siren/strobe units.
- On-board outputs: two open-collector, two voltage-free (relay) and 30 radio. System maximum of 34 outputs.
- Compatible with optional social-care peripherals.
- Grade 2 compliant.
- Built-in PSTN and IP alarm communicators.
- Optional GSM plug-on communicator available.
- Built-in radio transmitter, with a range of up to 500m.
- Mini-B USB port for engineer access.

### Safety Information

This product must be installed by qualified service personnel.

**WARNING:** BEFORE INSTALLING THIS EQUIPMENT, ENSURE THAT THE MAINS SUPPLY FOR THE CONTROL UNIT IS DISCONNECTED AND ISOLATED. All electrical connections must be carried out by a qualified electrician and comply with current local regulations.

**WARNING:** When connected to the mains with power applied, mains voltages are present on the shrouded heads of the terminal screws of the mains connector and on the fuse holder connections (Figure 3).

**WARNING:** The mains cable to the control unit must use a double-pole isolation device in accordance with EN 62368-1.

**Caution:** If you need to handle the PCB in the control unit, take standard precautions to prevent damage by static electricity.

**Exposure to radio-frequency radiation:** The radiated output power of this device is within those levels considered safe by European exposure limits. Nevertheless, when fitting the product, place it in such a manner as to minimise the potential for human contact during normal operation. To minimise exposure, users should be more than 200mm from the device during normal operation.

## Installing the control unit

### Step 1: Choose a location for the control unit

The control unit must be located:

- Within the protected area.
- Out of sight of potential intruders.

Do not locate the control unit:

- In a metal enclosure or close to large metal structures.
- Near to any source of electromagnetic or radio interference.
- Within 1 metre of high-voltage cables, metal pipes, computers, photocopiers, or other electrical or electronic equipment.
- In a location where maximum radio range or cable distances will be exceeded.

### Step 2: Carry out a radio survey

Carry out a radio survey using the DET-RSURV01 Radio Survey Tool to confirm that there will be sufficient signal strength between the planned location of the control unit and any radio devices.

### Step 3: Install cabling

Note the following:

- Normally, standard 7/0.2 un-screened alarm cable is suitable for wiring to any wired devices such as detectors.
- Screened cable may be needed if the cable runs near to sources of electromagnetic interference.
- Cables must enter the control unit using the dedicated cable-entry holes (Figure 2).
- Mains cable must be kept separate and routed away from the aerials (Figure 1).

Please refer to the Engineering Guide for guidance.

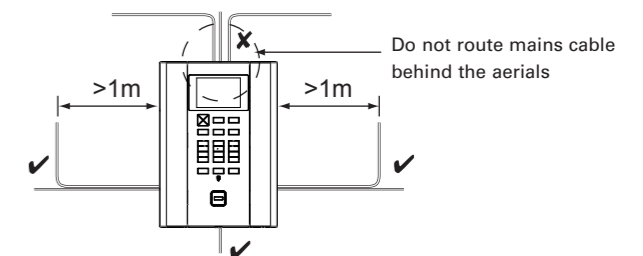


Figure 1. Mains cable routing

### Step 4: Open the control unit

Release the screw located near the bottom-right corner of the lid, slide the lid upwards, then open the lid from the right.

### Step 5: Mount the control unit

Mount the control unit using at least three fixing holes (Figure 2) and minimum 36mm long No8/4mm screws.



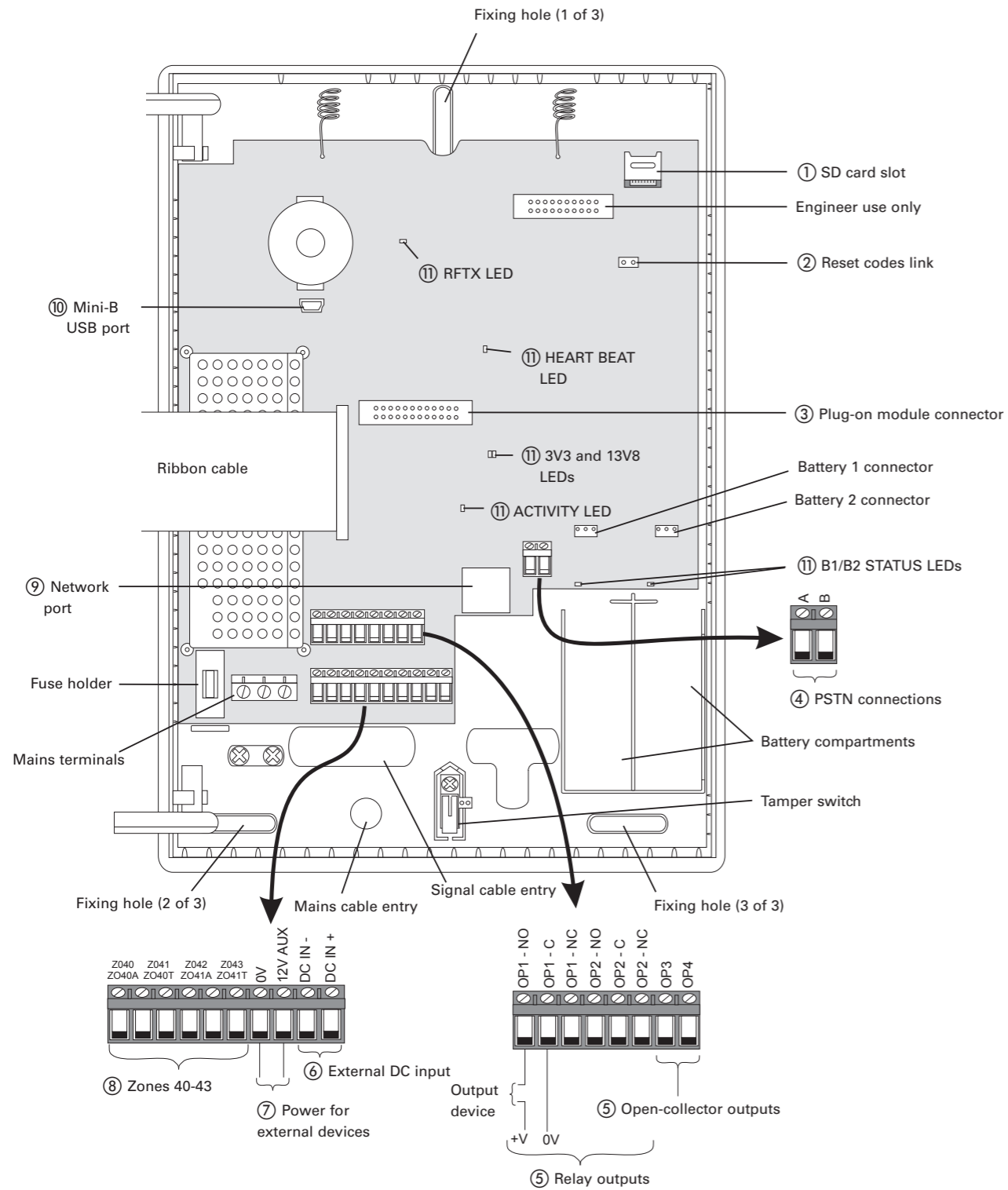


Figure 2. Control unit PCB

### Step 6: Connect wired devices

Make sure all power is disconnected, then connect any wired detectors or output devices you may be using (Figure 2).

If you are using a plug-on module, fit and connect the device as described in the module's installation instructions.

### Step 8: Connect the mains cable

**WARNING:** ENSURE THAT THE MAINS SUPPLY IS DISCONNECTED AND ISOLATED.

Connect the mains cable to the terminal block (Figure 3) and fit a strain-relief clamp and cable tie. Confirm the mains cable is routed as shown in Figure 1. Do not apply power until after the lid is re-fitted.

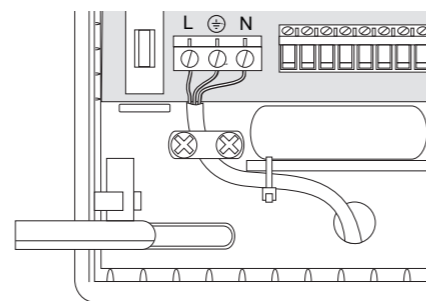


Figure 3. Mains connections

### Step 9: Connect the battery(ies)

**WARNING:** Connecting the battery starts the system and an alarm tone may be generated. If you are working at the top of a ladder, make sure that the sudden noise does not startle you and cause a fall. You can stop the sound by entering the default user code (1234) at the keypad.

One battery pack is supplied with the control unit, which provides 12 hours of operation in the event of a power fail. If required, a second battery pack can be fitted to double the period.

Fit the supplied battery(ies) into the battery compartment(s) and connect them to the battery connector(s) on the PCB (Figure 2).

### Step 10: Re-fit the lid, switch on and configure the system

Re-fit the lid, then switch on the mains supply to the control unit.

Go through the initial configuration prompts and set up the system as described in the Engineering Guide.

The default user code is 1234. You are prompted to specify an installer code during initial system configuration.

### PCB links, connectors and LEDs

The following sections provide information about the links, connectors and LEDs shown in Figure 2.

#### ① SD card slot

A micro-SD card can be used to store camera images from a compatible network camera, or to upgrade firmware or languages.

#### ② Reset codes link

You can use this link to reset the default user and installer codes in the event that either has been forgotten. Please refer to the Engineering Guide for details of how to use this link.

#### ③ Plug-on module connector

A plug-on module is available that enables the control unit to communicate alarm reports, speech messages and SMS text messages over a GSM mobile network. Please refer to the Engineering Guide for further details.

#### ④ PSTN connections

If you configure the control unit to communicate alarms to an Alarms Receiving Centre (ARC) over a Public Service Telephone Network (PSTN), connect the A and B terminals to the PSTN box.

#### ⑤ Outputs

The wired outputs that can be used to switch external equipment on or off.

OP1 and OP2 are relay (voltage-free) outputs. Connect to the common terminal and to either the NC (Normally Closed) or NO (Normally Open) terminal, as required.

OP3 and OP4 are open-collector transistor outputs, which by default, are 12Vdc when inactive and 0V when active (this can be reversed from the Installer menu).

**Note:** Radio outputs can also be used.

#### ⑥ External DC input

You can power the control unit using an external 13.8VDC power supply connected to the DC IN terminals.

#### ⑦ Power for external devices

You can use these terminals to power external 12Vdc devices.

**Note:** The backup battery(ies) do not provide power to these terminals in the event of a mains failure.

### ⑧ Zone connections

You can connect up to 4 wired detectors to the control unit using the Fully-Supervised Loop (FSL), 4-wire Closed Circuit (CC) or 2-wire CC wiring method (Figure 4). You must use the same method for all detectors connected to the control unit. If 4-wire CC is used, the number of wired zones is halved.

For any method, the total wiring and switch resistance must be less than 100 Ohms (EOL resistor shorted in the case of FSL).

By default, the system assumes normally-closed contacts. Detectors with normally-open contacts must be programmed with the "Inverted" attribute set.

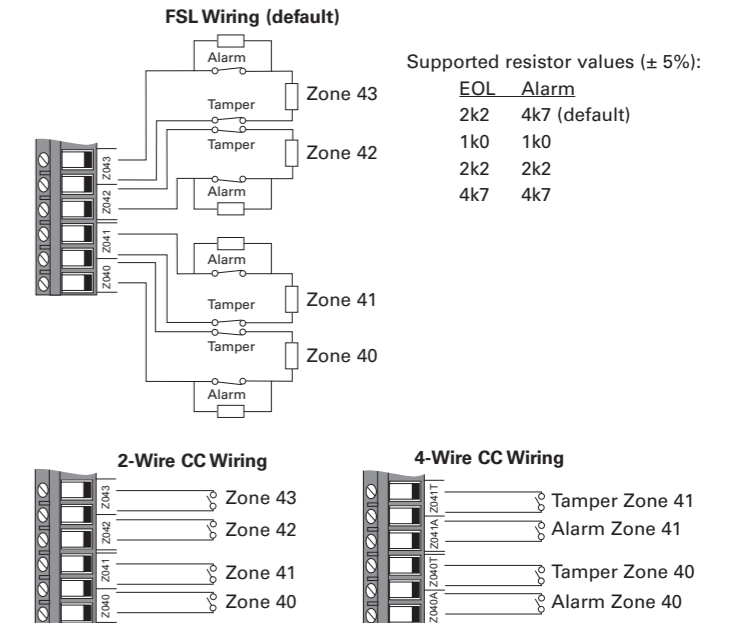


Figure 4. Zone wiring

### ⑨ Network port

Connecting to a network allows you to, for example, configure the control unit using the web interface, use network cameras to capture images when an alarm occurs, and communicate alarms to an alarms-receiving centre. Please refer to the Engineering Guide for further information.

**Note:** The control unit's network settings are configured from the Installer menu.

### ⑩ Mini-B USB port

You can connect a PC to this port and use the Downloader software to configure the control unit, or the Update Utility to update the firmware.

### ⑪ LEDs

- **RFTX:** Lit when there is radio transmission.
- **HEART BEAT:** Flashes approximately once every second to indicate normal operation.
- **3V3 and 13V8:** Lit when the internal power supply is functioning. If the LEDs are not lit after power is applied, remove all power, wait a few seconds and reapply power.
- **ACTIVITY:** Lit and flashes when the control unit is connected to the network and there is network activity.
- **B1/B2 STATUS LEDs:** These indicate the status of battery 1/2. Lit when charging, off when charging is complete, and flash slowly if there is a charging fault or no battery is fitted.

### Maintenance

Inspect the control unit once per year as part of general inspection of the whole system. At the control panel, check for any damage, check the battery and the action of the tamper switch, and use the Test menu to confirm signal strengths.

Please refer to the Engineering Guide for general guidance about maintaining the whole system.