

⑪ 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.

⑫ Loudspeaker connections

If fitted, a loudspeaker mimics alarm tones and repeats setting and entry tones. The loudspeaker must be min 16 Ohms. **Note:**

- A loudspeaker is not a warning device as described by EN50131-4.
- You can set the loudspeaker volume and partitions from the Installer menu.

⑬ Siren/strobe unit

Please refer to the installation instructions provided with the siren/strobe unit for connection details.

Note: Eaton radio siren/strobe units can be used instead of, or in addition to, a wired unit.

⑭ Kick-start link

Ordinarily, the control unit starts only after the mains supply is switched on, even if a battery is connected. If you want to operate the control unit temporarily using only the battery or a 12VDC supply), start the control unit by briefly shorting this link.

⑮ LEDs

- 3V3:** Lit when the internal power supply is functioning.
- HB** (heartbeat): Flashes approximately once every two seconds to indicate normal operation.
- LNK/ACT:** Flashes when the control unit is connected to the network and there is network activity.
- COMMS:** Lit when the plug-on module is communicating.

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, test the battery, check 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.

Specifications

Standards and Compliance

The installer must remove or adjust any compliance labelling if he/she selects a non-compliant configuration.
Intrusion compliance: EN 50131-3:2009; EN 50131-10:2014; EN 50131-5-3:2005+A1:2008; EN 50136-2:2013; BS 8243:2010; PD 6662:2010; IA 1501:2015.
Environmental class: Class II.
Alarm transmission: ATS category C.
Certification body: Telefication.

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: 384mm (h) x 245mm (w) x 94mm (d).
Weight: 1.5kg (without battery).
Case material: ABS.
Network port: Ethernet 10/100Mbps SSL/TLS.

Radio

Frequency and power: 868.6625MHz narrowband, 10mW.
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: 230VAC + 10%/-15%, 130mA max, 50Hz.
Control unit internal mains fuse: T250mA.
Control unit power supply: 13.7VDC, 1.0A max of which 180mA is reserved for battery recharge and 820mA to power the system.
Control unit PCB current consumption: 90mA quiescent; 110mA max (in alarm) excluding external devices, plug-on module and battery charging.
Standby battery: 12V, 7Ah, sealed lead acid. Min standby time: 12 hrs. Max recharge time: 72 hrs.
12V aux: 550mA max* **12V bell:** 400mA max*
12V bus: 400mA max* **14V4 aux:** 230mA max*
*Maximum current before triggering over-current protection. 12V outputs are 9.5VDC to 13.8VDC. 14V4 output is 9.5VDC to 14.7VDC.
Max p-to-p ripple voltage: 0.5V.
Low-battery fault at: <12V.
Aux power output fault at: <9V.
OP1/2: Voltage-free relays, 1A @24Vdc max.
OP3: Open collector transistor, 500mA max.
Plug-by outputs: Open collector transistor, 50mA max.
Loudspeaker: 12VDC, 280mA max. Min impedance 16 Ohm.

SIMPLIFIED EU DECLARATION OF CONFORMITY

Hereby, Eaton Electrical Products Ltd declares that the radio equipment type i-on40H 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

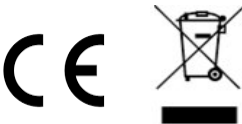
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i-on40H Control Unit

Installation Instructions

The i-on40H control unit provides on-board support for up to 30 radio zones and 10 wired zones. An additional 40 zones can be connected using radio or wired expanders.

The i-on40H provides a reliable, easy-to-install, wired or wire-free solution for domestic and commercial applications.

Key features

- Provides up to 30 radio and 10 wired zones on-board, with a system maximum of 80 zones.
- Compatible with a wide variety of wired and wire-free detectors including PIR sensors, smoke detectors, hold-up devices, perimeter sensors and door contacts.
- Supports up to 20 bus devices (keypads, expanders, etc.).
- Configurable through a 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.
- On-board connections for wired siren/strobe unit.
- Compatible with Eaton radio siren/strobe units.
- On-board outputs: one open-collector, two voltage-free (relay) and 10 radio. System maximum of 40 outputs.
- Plug-by communicator port (12 outputs).
- Grade 2 compliant.
- Built-in Alarm Receiving Centre (ARC) IP communicator.
- Optional plug-on communicators available.
- Built-in radio transmitter, with a range of up to 500m.
- Engineer keypad port and mini-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 (Figure 5).

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 (but not in an entry or exit zone).
- Ideally, more than 2 metres from the floor.
- Out of sight of potential intruders.
- Upright (battery at the bottom) on a wall or other flat surface (to discourage tamper attempts from the rear).

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. (Refer to Steps 2 and 4 below.)

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: Check power availability

Check that the battery is able to power the system for at least 12 hours during a mains failure, including two periods of 15 minutes in alarm. This is the minimum period for grade 2 compliance.

To do this, you will need to calculate the total current drawn from the battery during a mains failure. Please refer to the Engineering Guide for a worked example.

Step 4: Install cabling

Note the following (refer to the Engineering Guide for guidance):

- Normally, standard 7/0.2 un-screened alarm cable is suitable for wiring to bus devices (e.g. keypads) and wired siren/strobe units.
- Screened cable may be needed if the cable runs near to sources of electromagnetic interference.
- Keep cables to bus devices separate from any other wiring.
- You can connect bus devices using a daisy-chain (serial) or star (parallel) configuration.
- Mains cable must be kept separate and routed away from the aerials (Figure 1).
- Cables must enter the control unit using the dedicated cable-entry holes (Figure 4).
- The maximum length of the bus cable depends on a number of factors, including the number of devices powered by the bus and whether daisy-chain or star connections are used. Remote power supplies may be required.

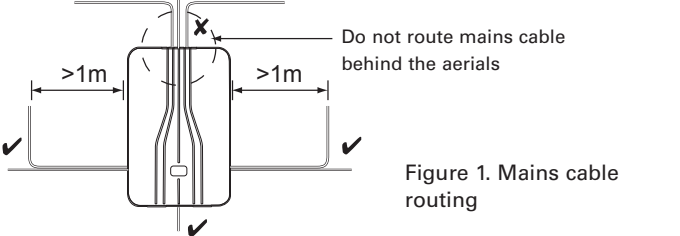
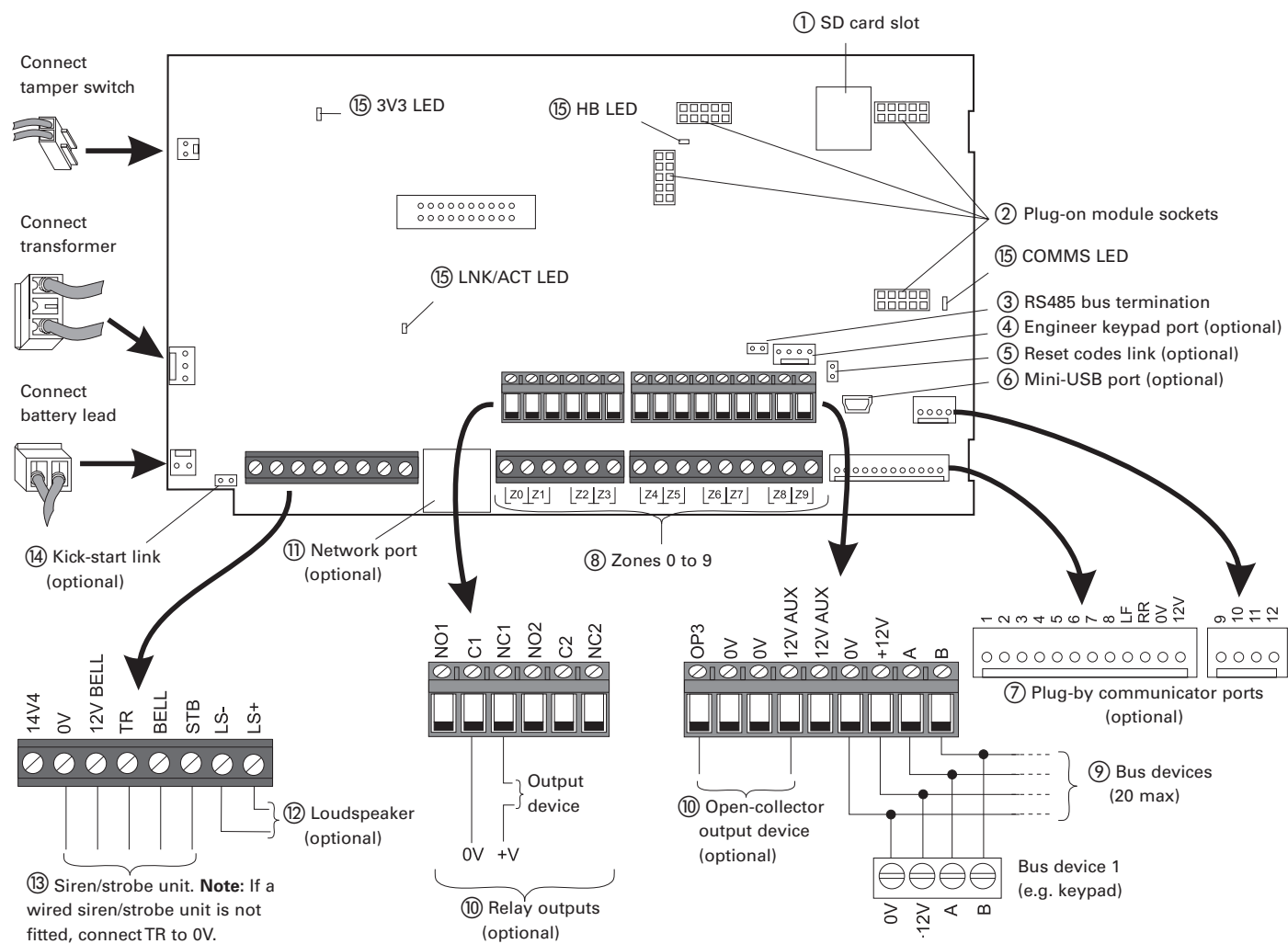


Figure 1. Mains cable routing





The diagram illustrates the rear panel of the 1000 Series 1U rack-mountable power supply unit, highlighting various ports and connectors. The components are labeled as follows:

- ① SD card slot**: Located at the top left.
- ② Plug-on module sockets**: Located below the SD card slot.
- ③ RS485 bus termination**: A small component near the RS485 ports.
- ④ Engineer keypad port (optional)**: A port for connecting an engineer keypad.
- ⑤ Reset codes link (optional)**: A link for reset codes.
- ⑥ Mini-USB port (optional)**: A port for a Mini-USB connection.
- ⑦ Plug-by communicator ports (optional)**: A set of ports for plug-by communication.
- ⑧ COMMS LED**: A status LED for communications.
- ⑨ Bus devices (20 max)**: A set of terminals for connecting bus devices.
- ⑩ Open-collector output device (optional)**: A set of terminals for an open-collector output device.

The diagram also shows the following ports and connectors:

- 0 to 9**: A row of 10 ports, likely for status LEDs or indicators.
- OP3**: A port for the open-collector output device.
- 0V**: Ground terminals for the open-collector output device.
- 12V AUX**: Auxiliary 12V power terminals for the open-collector output device.
- +12V**: Main 12V power terminal for the open-collector output device.
- A** and **B**: Terminals for the open-collector output device.
- 1** through **12**: Terminals for the plug-by communicator ports.
- LF**, **RR**, **0V**, and **12V**: Specific terminals for the plug-by communicator ports.
- 0V**, **-12V**, **A**, and **B**: Terminals for the bus devices.

Note: Radio outputs can also be used.