

Honeywell IdentIPoint Intelligent Smartcard Readers

QUICK INSTALLATION GUIDE

⚠ WARNING: This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the Instructions Manual, may cause interference with radio communication. It has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC Rules, that are designed to provide reasonable protection against such interference when operated in a residential and commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case, users at their own expense will be required to take whatever measures may be required to correct the interference. Any unauthorized modification of this equipment may result in the revocation of the owner's authority to continue its operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

⚠ WARNING: Fire Safety and Liability Notice: Never connect card readers to any critical entry, exit door, barrier, elevator or gate without providing an alternative exit in accordance with all fire and life safety codes pertinent to the installation. These fire and safety codes vary from city to city and you must get approval from local fire officials whenever using an electronic product to control a door or other barrier.

Use of egress buttons, for example, may be illegal in some cities. In most applications, single action exit without prior knowledge of what to do is a life safety requirement. Always make certain that any required approvals are obtained in writing. Verbal approvals are not valid. Wiring of door strikes and locks would also accordingly follow either a fail-safe or fail-secure configuration.

⚠ WARNING: Earth ground all enclosures for proper installation. It is mandatory to use body earth on the terminal of the fingerprint reader.

⚠ WARNING: Exit switch wiring must be completed within the protected area or not readily accessible outside the protected area.

⚠ WARNING: Use suppressors on all door locks. Use 14507020-001 diode suppression network. Honeywell recommends only DC locks.

⚠ CAUTION: If the bus wiring enters or exits the building, the protectors listed in Installation Manual must be used. Bus length for RS485 must not exceed 500m end-to-end.

⚠ CAUTION: Electro-static discharge (ESD) can damage CMOS integrated circuits and modules. To prevent damage always follow these procedures:

- Use static shield packaging and containers to transport all electronic components, including completed reader assemblies.
- Handle all ESD sensitive components at an approved static controlled workstation.

BEFORE INSTALLATION

1. Verify the mounting locations with the job drawings.
2. Unpack the IdentIPoint reader, IOM and accessories and check them. Report any damaged or missing components to a Honeywell representative. A claim must be filed with the commercial carrier responsible.

Parts

Reader box

1. Intelligent Reader Unit – 1
2. Mounting Plate – 1
3. Mounting Hardware - Screws and Wall Anchors – 6 each

4. Extra Tamper Resistant Screws – 2
5. Tool for Tamper Resistant Screw – 1
6. Connector with cable – 2 (9 and 10 pin)
7. Resistors – 2K (Color Code: RED-BLACK-RED-GOLD; 0.5W axial type, 5% tolerance) – 3
8. Resistors – 1K (Color Code: BROWN-BLACK-RED-GOLD; 0.5W axial type, 5% tolerance) – 3
9. Square ferrite clip – 1
10. Round ferrite clip – 1
11. Quick Installation Guide – 1

IOM box

1. Input / Output Module Unit – 1
2. Mounting Hardware - Screws and Wall Anchors – 3 each
3. Extra Tamper Resistant Screws – 2
4. Tool for Tamper Resistant Screw – 1
5. Connectors for termination – 12 x 2 connections; 3 x 3 connections
6. Resistors – 2K (Color Code: RED-BLACK-RED-GOLD; 0.5W axial type, 5% tolerance) – 4
7. Resistors – 1K (Color Code: BROWN-BLACK-RED-GOLD; 0.5W axial type, 5% tolerance) – 4
8. Quick Installation Guide – 1

ASSEMBLY, MOUNTING AND INSTALLATION

Notes:

- The reader and IOM can be mounted either on a drywall or on a concrete wall using conduits and a gang-box.
- The drywall and gang-boxes shown here are just representations of the actual hardware. During installation, use the hardware as per the required dimensions and availability.

Reader Drywall Mounting

1. **Fig.1** and **Fig.2** show the parts of the IdentIPoint reader. Use the back-plate of the reader to mark out the position of the reader on the drywall. Mark the positions of the mounting screws and the opening for routing the cables.
2. Cut the cable opening on the drywall using suitable tools and punch an adequate number of holes for the mounting screws. It is advisable to use at least four screws for fixing the reader. Use the wall anchors for additional holding strength. See **Fig.3**.
3. Hold the back-plate in position on the drywall. Align the mounting screws with their holes and fasten the back-plate securely on the drywall using the screws. See **Fig.3**.
4. Route the field wires including the Ethernet cable (if required) from behind the drywall through the cable opening and bring them to the front of the mounting surface. Clip the square ferrite clip on the reader's Ethernet pigtail. See **Fig.6**. Connect the field wiring to the correct Molex pigtails. See **Fig.5**. For reader connection details see **Fig.10**. Plug the Molex terminal(s) in ports J9 and J10 at the back of the reader. See **Fig.6**. Clip (with two turns wrapped) the round ferrite clip on the field Ethernet cable. See **Fig.5**. Plug the RJ45 connector of the field Ethernet cable into the Ethernet port of the reader at the end of the pigtail. See **Fig.6**. Drop the excess lengths of Molex and Ethernet wires behind the drywall. Set the S1 DIP switch if the reader is to be connected to an IOM via RS485. See **Fig.10** and appendix for more details.
5. Once all the connections and settings are done, hold the reader against the back-plate, aligning the mounting slots at the back of the reader with their corresponding catches on the back-plate and push it downwards until it hooks into place firmly. See **Fig.7** and **Fig.8**.
6. Use the Allen wrench to tighten the tamper-resistant screw at the bottom of the reader. See **Fig.9**.

Gang-box (concrete wall) Mounting

1. **Fig.1** and **Fig.2** show the parts of the IdentIPoint reader. Ensure that the correct sized gang-box is securely embedded in the concrete wall. The holes provided in the gang-box for the screws should align properly with at least two of the holes provided in the reader back-plate for the screws.
2. Hold the back-plate in position over the gang-box. Align the mounting screws with their holes and fasten the back-plate securely on the gang-box using the screws. See **Fig.4**.

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3. Route the field wiring including the Ethernet cable (if required) from the conduits into the gang-box. Clip the square ferrite clip on the reader's Ethernet pigtail. See **Fig.6**. Connect the field wiring to the correct Molex pigtails. See **Fig.5**. For reader connection details see **Fig.10**. Route the Molex terminal(s) through the cable opening on the back-plate towards the front of the mounting surface (see **Fig.5**) and plug them in ports J9 and J10 at the back of the reader. See **Fig.6**. Clip (with two turns wrapped) the round ferrite clip on the field Ethernet cable. See **Fig.5**. Plug the RJ45 connector of the field Ethernet cable into the Ethernet port of the reader provided at the end of the pigtail. Accommodate the Molex and Ethernet

pigtails inside the gang-box. Set the S1 DIP switch if the reader is to be connected to an IOM via RS485. See **Fig.10** and appendix for more details.

4. Once all the connections and settings are done, hold the reader against the back-plate, aligning the mounting slots at the back of the reader with their corresponding catches on the back-plate and push it downwards until it hooks into place firmly. See **Fig.7** and **Fig.8**.
5. Use the Allen wrench to tighten the tamper-resistant screw at the bottom of the reader. See **Fig.9**.

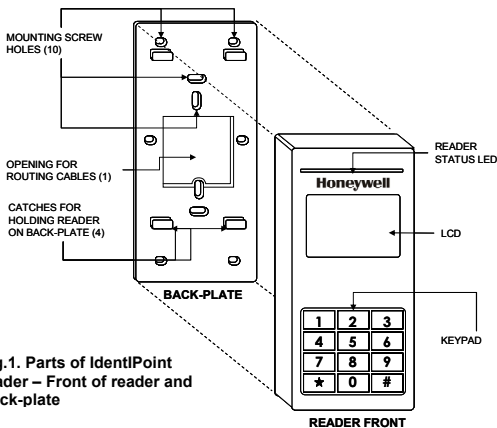


Fig.1. Parts of IdentIPoint reader – Front of reader and Back-plate

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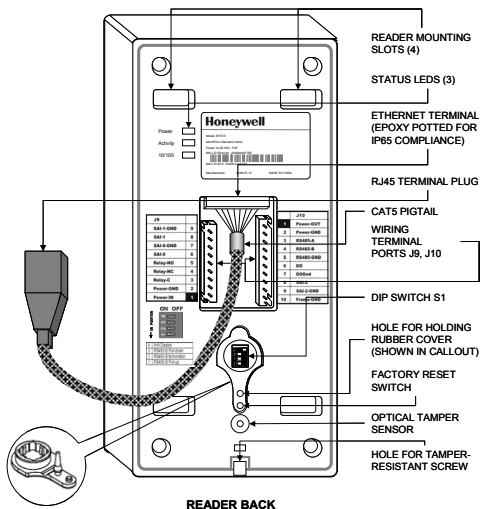


Fig.2. Parts of IdentIPoint reader – Back of reader

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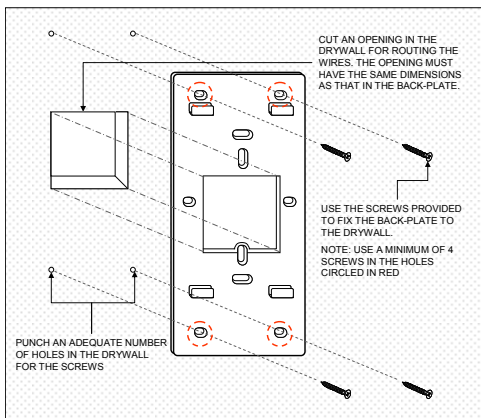


Fig.3. Fixing reader back-plate to drywall

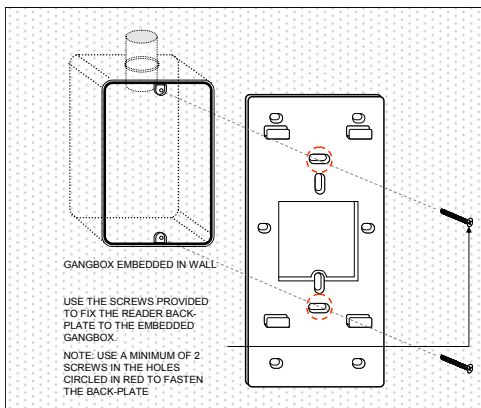


Fig.4. Fixing reader back-plate to concrete wall

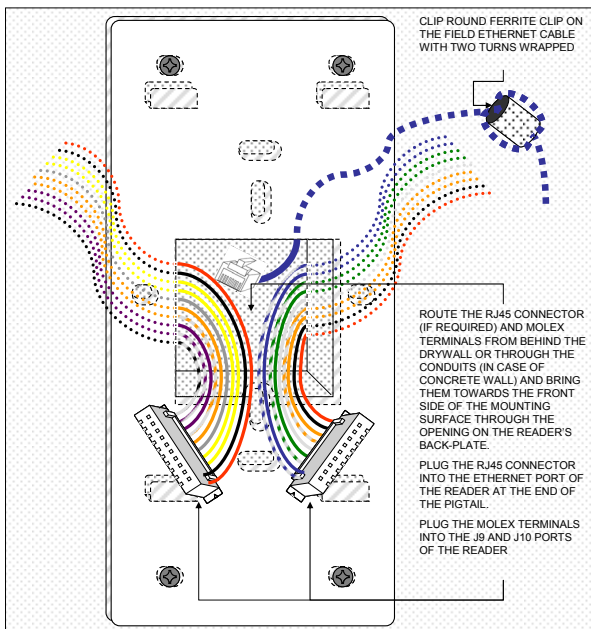


Fig.5. Routing the wires before plugging the connectors into the reader

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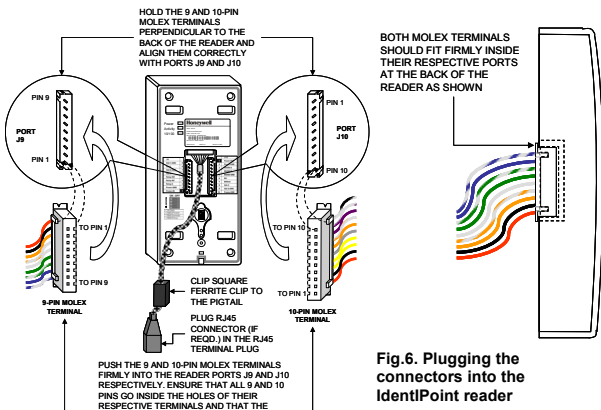


Fig.6. Plugging the connectors into the IdentiPoint reader

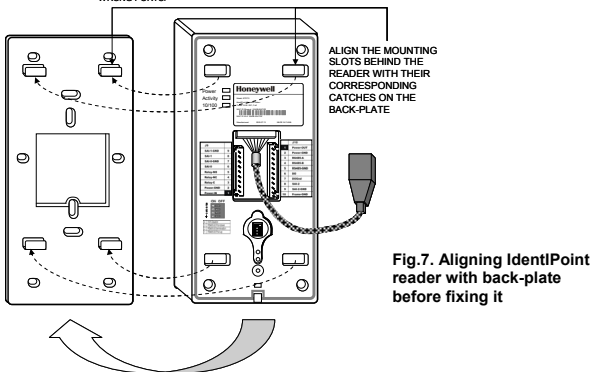


Fig.7. Aligning IdentiPoint reader with back-plate before fixing it

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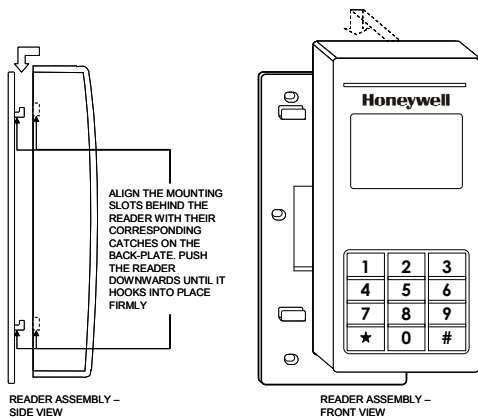


Fig.8. Fixing the IdentiPoint reader on the back-plate

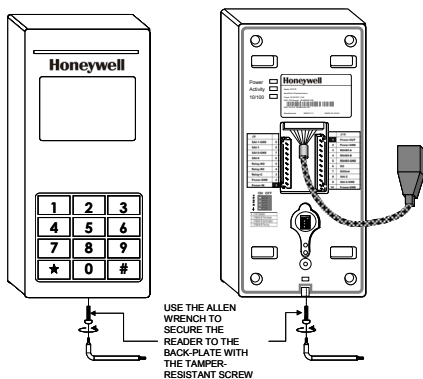


Fig.9. Securing the IdentiPoint reader to the back-plate

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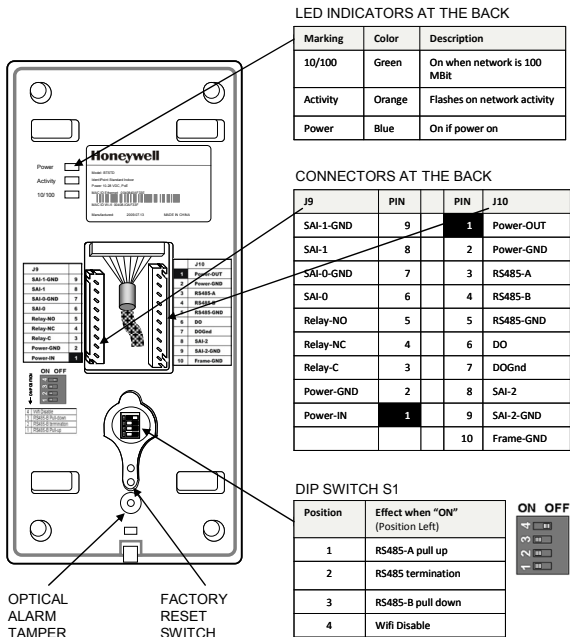


Fig10. Reader connections

INPUT/OUTPUT MODULE

Drywall Mounting

1. The IOM is a clamshell plastic case. The back half of the case has the electronic circuit board fastened to it while the front case cover swings open to allow access to the electronics and wiring. Pull open the front cover. This reveals the mounting holes and other components inside the IOM. See **Fig.11** and **Fig.12**.
2. Use the back half to mark out the position of the IOM on the drywall. Also mark the positions of the mounting screws and the openings for routing the cables. See **Fig.13**.
3. Cut the two cable openings on the drywall using suitable tools. The openings should be aligned with the knock-out holes provided on the back half for routing the cables. Also punch three holes at suitable places in the drywall for the mounting screws. Use the wall anchors for additional holding strength. See **Fig.13**.
4. Ensure that the knock-out holes on the back half have been opened up. (Knock-out holes are also provided on both sides of the IOM enclosure in case field conditions require routing the wires from the sides.) Hold the back half in position on the drywall. Align the mounting screws with their holes and fasten the back half securely on the drywall using the three screws. See **Fig.13**.
5. Route the field wires from behind the drywall through the cable opening and bring them inside the IOM via the knock-out holes. Connect the wire terminals to the ends of the wires and plug the wire

terminal(s) in their correct slots on the PCB. See **Fig.15**. For IOM connection details see **Fig.17**. Drop the excess wire lengths behind the drywall. Set the S1 DIP switch if the IOM is to be connected to a reader via RS485. See **Fig.17** and appendix for more details.

6. Set the IOM address as per **Fig.17** and appendix. Once all connections and settings are done, close the IOM enclosure by pressing the front case cover over the back half. See **Fig.15**.
7. Use the Allen wrench to tighten the tamper-resistant screw at the top of the IOM enclosure. See **Fig.16**.

Gang-box (concrete wall) Mounting

1. The IOM is a clamshell plastic case. The back half of the case has the electronic circuit board fastened to it while the front case cover swings open to allow access to the electronics and wiring. Pull open the front cover. This reveals the mounting holes and other components inside the IOM. See **Fig.11** and **Fig.12**.
2. Ensure that the correct sized gang-box is securely embedded in the concrete wall. One of the holes provided in the gang-box for the screws should align properly with at least the top hole provided in the IOM's back half for the screw. For the remaining screws punch additional holes at the correct places directly in the concrete wall. Use the wall anchors for additional holding strength. The gang-box itself should be large enough to cover both the knock-out cable holes at the back of the IOM. See **Fig.14**.

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3. Route the field wires from the conduits into the gang-box and bring them inside the IOM via the knock-out holes.
4. The IOM can now be mounted on the wall. Hold the back half in position over the gang-box and wall. Align the three mounting screws with their holes and fasten the back half securely on the gang-box and wall using the screws. See **Fig.14**.
5. Connect the wire terminals to the ends of the wires and plug the wire terminal(s) in their correct slots on the PCB. See **Fig.15**. For IOM connection details see **Fig.17**. Accommodate any excess wire lengths inside the gang-box. Set the S1 DIP switch if the IOM is to be connected to a reader via RS485. See **Fig.17** and appendix for more details.
6. Set the IOM address as per **Fig.17** and appendix. Once all connections and settings are done, close the IOM enclosure by pressing the front case cover over the back half. See **Fig.15**.
7. Use the Allen wrench to tighten the tamper-resistant screw at the top of the IOM enclosure. See **Fig.16**.

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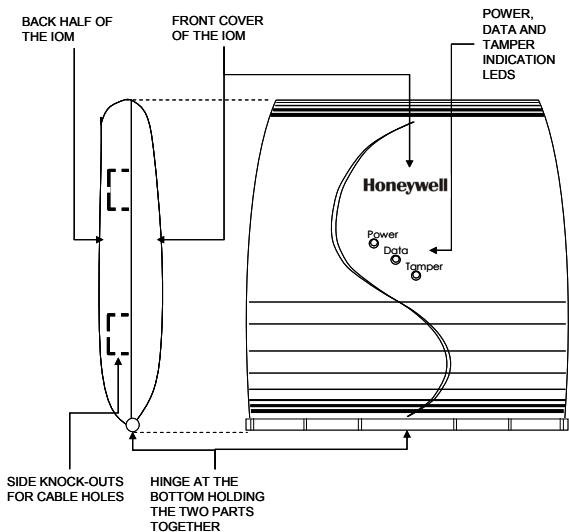


Fig.11. Outer structure of IOM – Front and side view

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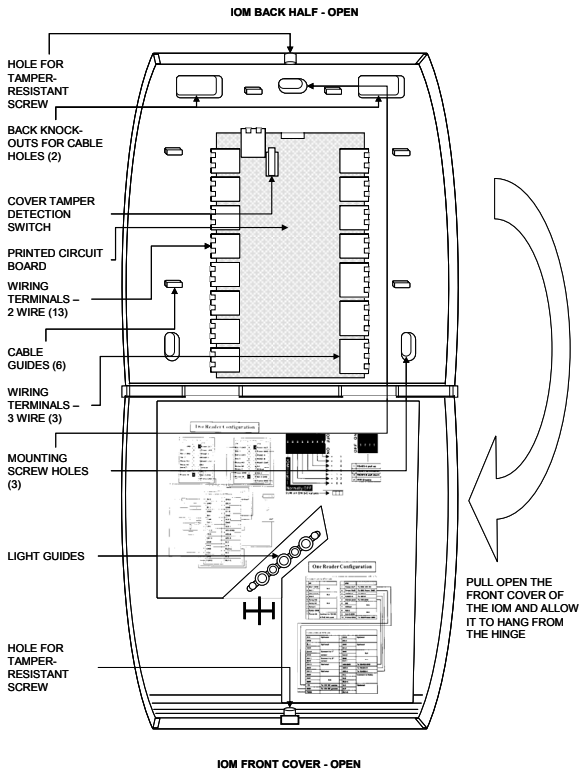


Fig.12. Internal structure and components of IOM

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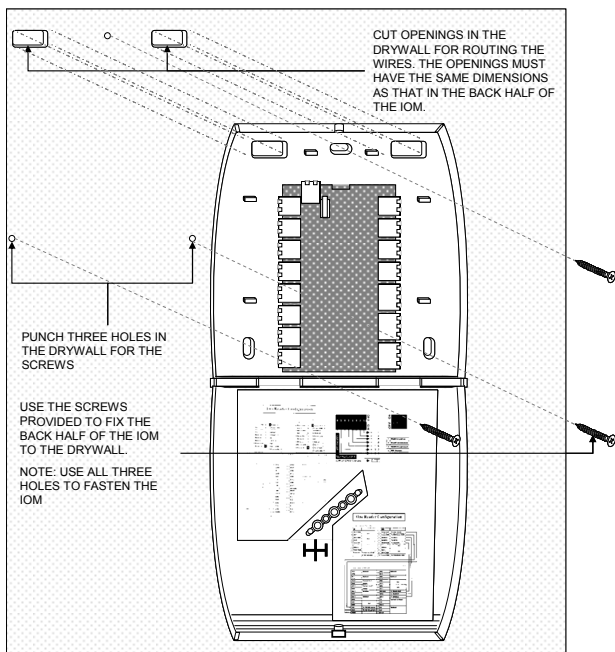


Fig.13. Fixing the IOM on a drywall

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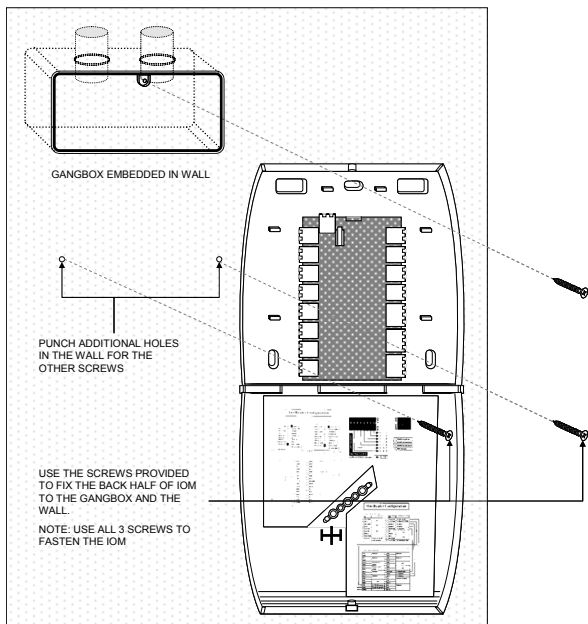


Fig.14. Fixing the IOM on a concrete wall using gang-box and conduit

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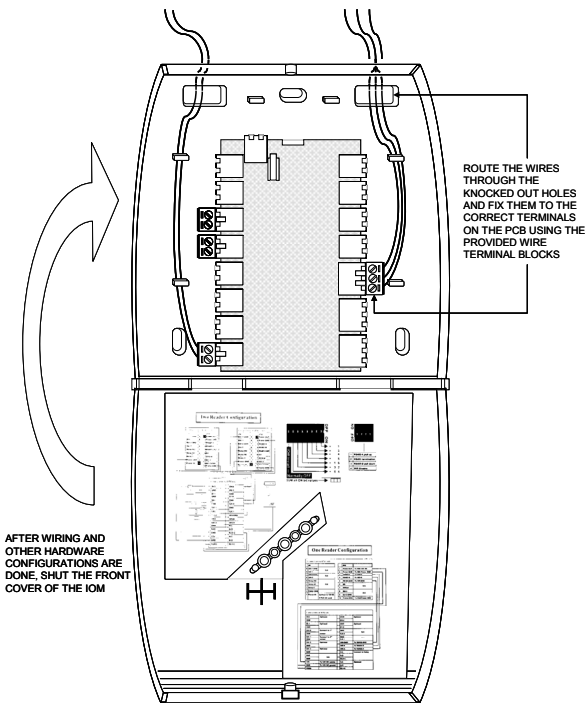


Fig.15. Routing the wires and connecting them to the IOM PCB

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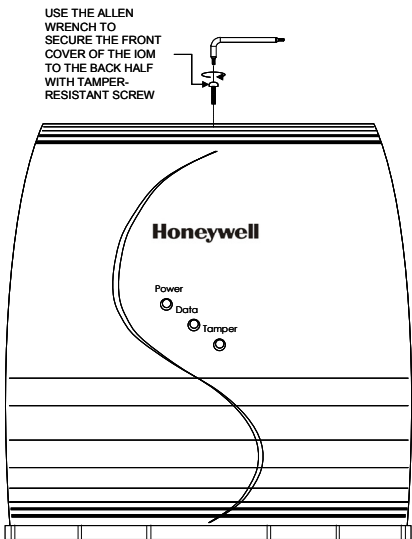


Fig.16. Securing the front cover onto the back half of the IOM

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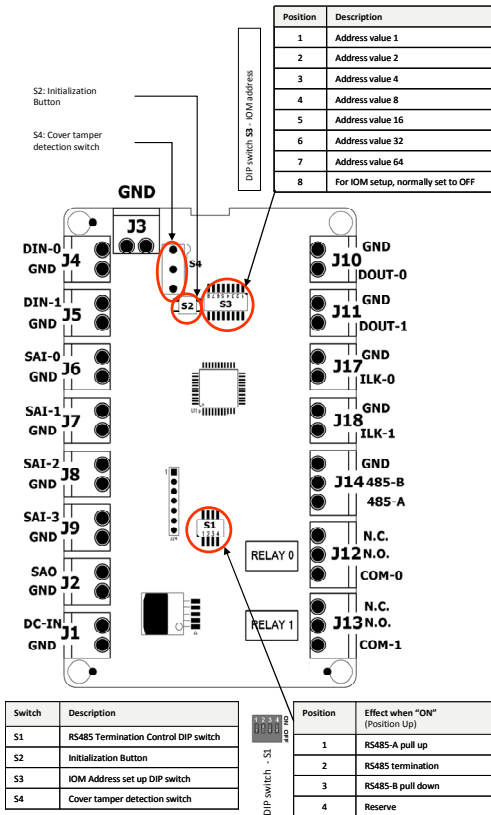


Fig.17. IOM connections

APPENDIX

WIRING DIAGRAMS

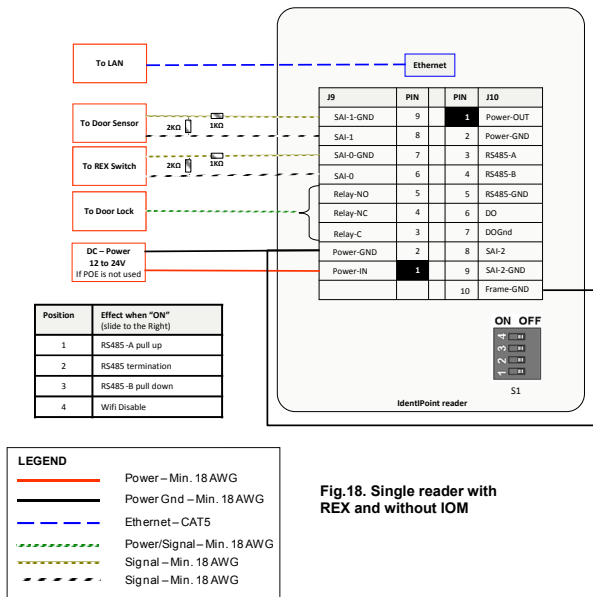


Fig.18. Single reader with REX and without IOM

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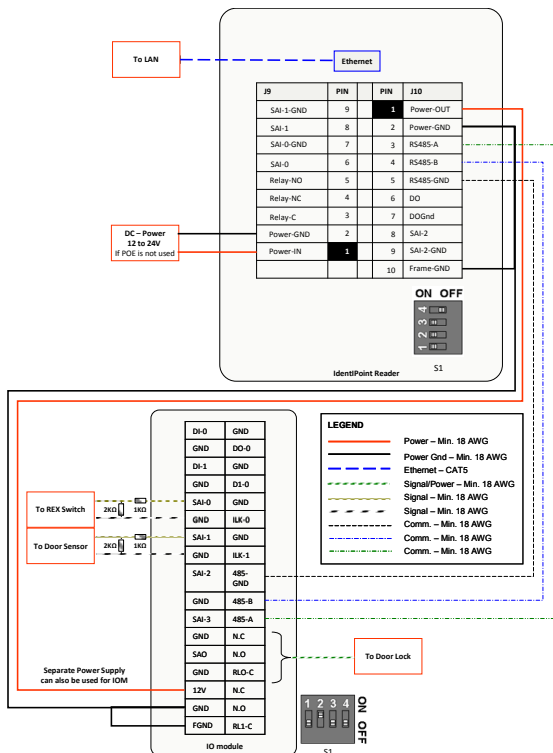


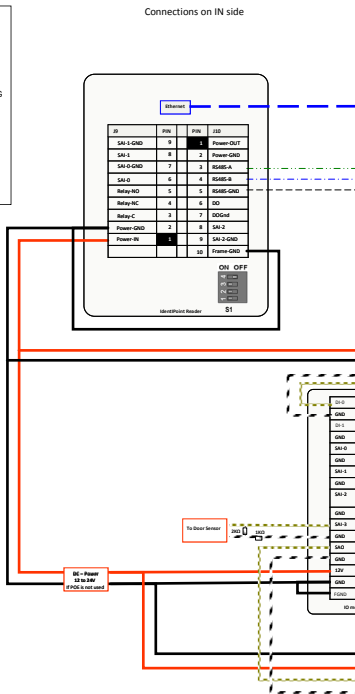
Fig.19. Single reader with REX and IOM (S1 DIP switch settings shown)

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LEGEND

- Power – Min. 18 AWG
- Power Gnd – Min. 18 AWG
- - - - - Power – Min. 18 AWG
- - - - - Power Gnd – Min. 18 AWG
- - - - - CAT5
- - - - - Signal/Power – Min. 18 AWG
- - - - - Signal – Min. 18 AWG
- - - - - Signal – Min. 18 AWG
- - - - - Comm. – Min. 18 AWG
- - - - - Comm. – Min. 18 AWG
- - - - - Comm. – Min. 18 AWG
- - - - - Comm. – Min. 18 AWG
- - - - - Comm. – Min. 18 AWG

** This drawing continues on the opposite page*

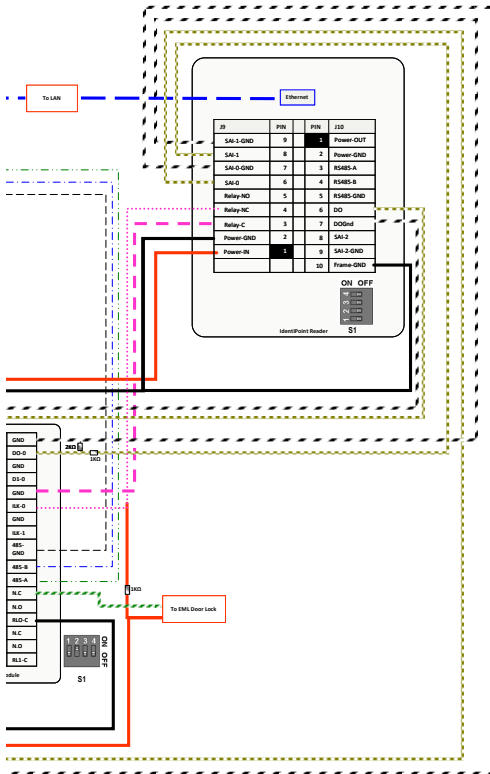


Note: For Dual Reader setup the Door Sensor (Connection to IN Reader) is always connected to SAI3.

Fig.20. Two readers with IOM (S1 DIP switch settings)

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Connections on OUT side



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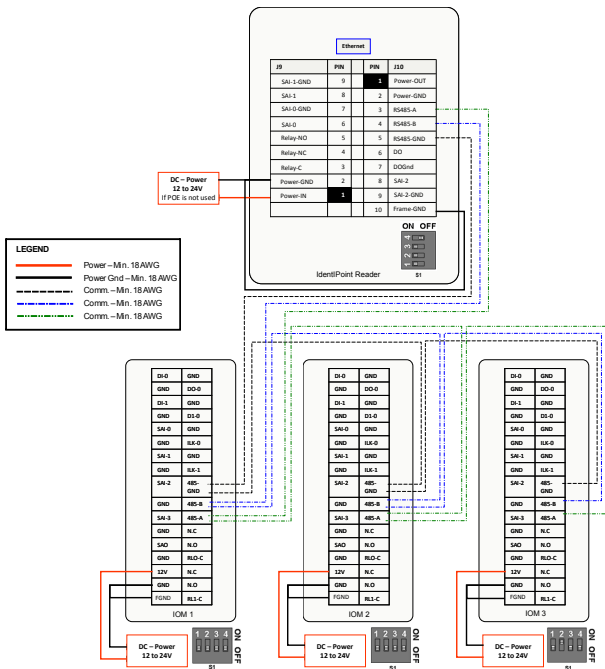
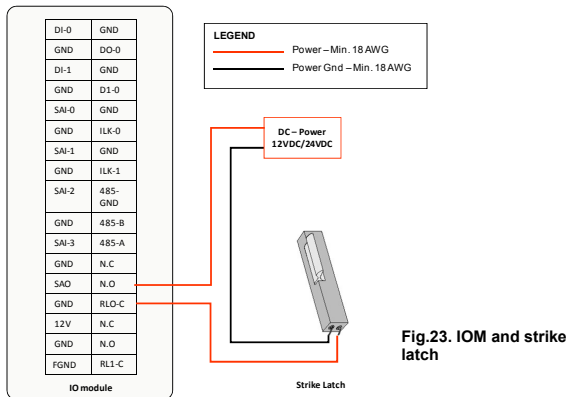
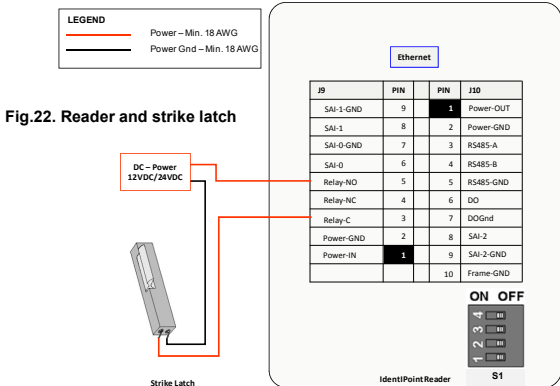
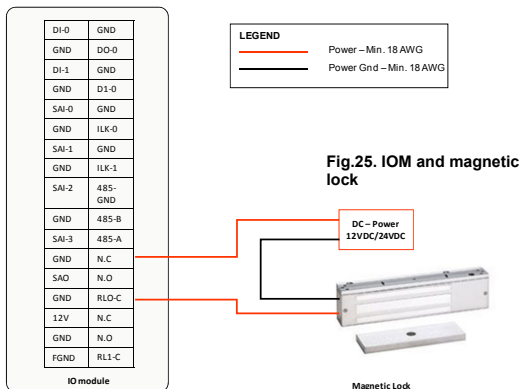
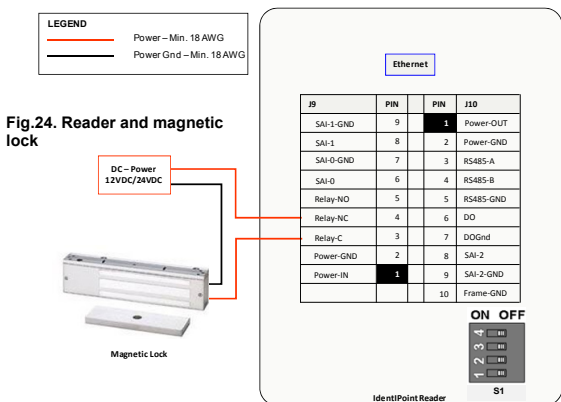


Fig.21. Reader with three IOMs on a RS485 bus (S1 DIP switch settings shown)

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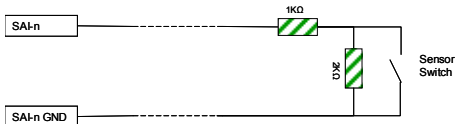


Fig.26. Supervisory Analog Inputs

Note: Door sense is considered open when sensor switch is open

- 1** EACH DOOR STRIKE REQUIRES A 14507020-001 DIODE SUPPRESSION NETWORK. DOOR STRIKE MAY DRAW A MAXIMUM CURRENT OF 2A; REGULATED 12/ 24 VDC. DOOR STRIKE MUST BE UL LISTED.
- 2** DOOR CONTACTS MUST BE UL LISTED. MAXIMUM WIRE LENGTH 500 FT (152M). WIRE TYPE 18 AWG (0.8 SQ MM), 50 OHM 60 mA MAXIMUM.
- 3** EXIT SWITCH: WIRING MUST BE COMPLETED WITHIN THE PROTECTED AREA OR NOT READILY ACCESSIBLE OUTSIDE THE PROTECTED AREA.
- 4** ALL WIRING MUST CONFORM TO APPLICABLE LOCAL CODES, ORDINANCES, AND REGULATIONS
- 5** DO NOT ROUTE COMMUNICATION WIRES WITH POWER OR LOCKING DEVICES.
NOTE: FOR COMMUNICATION CIRCUITS AND OTHER APPLICABLE WIRING CIRCUITS WHERE WIRING ENTERS AND EXITS THE BUILDING, REFER TO LIGHTNING PROTECTOR TABLE FOR APPROPRIATE LIGHTNING PROTECTOR USAGE.

RS485 COMMUNICATION AND TERMINATION SETTING

Both IdentIPoint readers and IOMs are equipped with a termination circuit and do not need an external termination resistor. Setting the DIP switch 2 on S1 to ON introduces a termination resistor

on the RS485 line. The units that sit physically on both ends of an RS485 bus should have their RS485 termination turned on. It is also recommended to turn on the pull-up and pull-down resistors in the IdentIPoint reader (master).

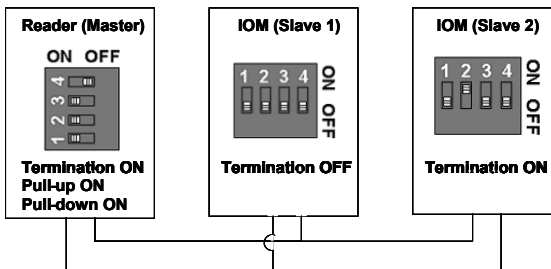


Fig.27. DIP Switch S1 settings on reader and IOMs for RS485 termination

IOM ADDRESS SET UP

Each IOM should have its own address. The address could range from 1 to 127. Never use zero as IOM address as zero is reserved for the master device.

Note: It is recommended not to attach more than 4 IOM units to the RS485 bus to maintain a reasonable signal/response time delay between the reader and IOMs. Hence IOM addresses must be from 1 to 4 only.

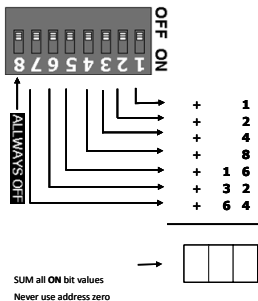


Fig.28. IOM Address set up

To work out the address, select a combination of bit locations on the DIP switch. Each bit has its own value representation. The RS485 address is obtained by adding all ON-bit values. E.g. Decimal value 37 will be obtained by turning ON bits 1, 3 and 6 which equivalents to 1+4+32.

NOTE: Please refer to IdentIPoint Hardware Installation Manual (doc. no. 95-7767) for more details on the following items:

- Overall system architecture
- Power supply installation
- Detailed wiring descriptions for readers, IOM and peripheral devices
- Power-over-Ethernet wiring

CERTIFICATIONS

Readers

- CE
- C-tick
- IP-65 (Basic Outdoor Version Only)

United States

- FCC 47 CFR Part 15, Subpart B, sections 107(a) & 109(a) Class B
- Section 201 to Section 205, section 207, section 209, section 215c, section 247 and section 35c

European Union

- EN 55022:2006; EN61000-3-2:2006
- EN 61000-6-3:2007
- EN 50130-4:1995+A1:1998+A2:2003
- EN 50133-1:1997
- EN 50133-2-1:2000

- EN 50134-1:2000
- EN 50134-3:2001
- EN 60950-1:2001
- EN 301 489-01 V1.6.1
- EN 301 489-03 V1.4.1
- EN 300 330-02 V1.3.1

IOM

- CE
- C-tick

United States

- FCC 47 CFR Part 15, Subpart B, sections 107(a) & 109(a) Class B
- Section 201 to Section 202, section 207

European Union

- EN 55022:2006EN 60950-1:2001

(CERTIFICATIONS ARE IN PROGRESS)



WARNING: Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

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For technical assistance, call your nearest Honeywell office.

Feedback

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