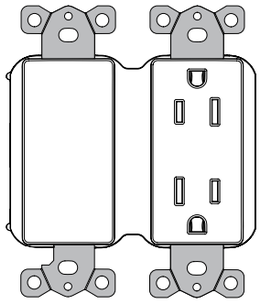
SafePlug®

Fire, Shock & Power Protection!

SafePlug Model 1300 Electrical Outlet Installation Manual

P/N 5145



RIGHTPLUG Compatible

Read completely before getting started.

Important Information

SafePlug® electrical outlets add fire, shock and power-fault protection to your home or office. To deliver electricity to an electrical device with the protection of the safety features found in a SafePlug Model 1300 electrical outlet, use a cord-set plug equipped with RightPlug™ technology. If the electrical device is not equipped with the RightPlug technology, retrofit it with a Model 10XX Series RightPlug compliant Tag. Model 10XX Series RightPlug complaint Tags are available on-line at www.safeplug.com or by calling 1-877-755-7233. Please follow the "SafePlug Model 10XX Tag Installation Manual" for Tag installation instructions.

WARNINGS:

- Refer to the local building code for additional installation requirements.
- SafePlug electrical outlets interrupt the electrical supply to devices plugged into them when an unsafe condition is detected. As such SafePlug electrical outlets must not be used for life sustaining or any other electrical device that could cause an adverse condition if disconnected. Use on a refrigerator or freezer could result in food spoilage if the SafePlug electrical outlet detects an electrical fault.
- SafePlug electrical outlets should be installed by a qualified electrician.
- Residential electrical systems contain lethal voltages. Disconnect power before installing this product.
- Operation of any RF generating equipment, including this product, may interfere with the functionality of near-by inadequately protected medical devices. Consult a physician or the manufacturer of the medical device to answer any questions. Other near-by electronic equipment may also be subject to interference.
- Do not touch the plug blades when inserting a plug into any electrical outlet. The SafePlug electrical outlet can deliver high voltages like a standard electrical outlet when a RightPlug equipped cord-set is partially inserted.
- SafePlug electrical outlets are designed to have electrical devices plugged into them directly. Use of an extension cord may reduce fire protection provided by the SafePlug electrical outlet for the device(s) plugged into the extension cord.
- SafePlug electrical outlets may disconnect power from a computer without warning due to an electrical fire hazard or a power fault. This sudden loss of power can result in loss of computer records, information or documents. For computers, use an uninterruptible power supply between the SafePlug outlet and the computer.

NOTES:

- This device complies with FCC electromagnetic emission limits for mobile devices. This device complies with Health Canada Safety Code 6 electromagnetic exposure limits for the general public. For maximum safety, we recommend against operating any electronic device within 8 inches (20cm) of your body for extended periods of time, unless the device has been specifically designed and tested for such use.

USA

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. 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 try to correct the interference by one of more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

Warning:

Changes or modifications not expressly approved by OFI, Inc. could void the user's authority to operate the equipment

CANADA

This Class B digital apparatus complies with Canadian ICES-003. This device complies with Canadian RSS-210. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Specifications:

SafePlug Model 1300 Outlet

Wiring	For use on 15 Ampere branch circuits and with 14 AWG solid copper conductors only.
Electrical Supply	125V 60Hz 15A
Max. Load	15A, 1875W resistive, 1000W tungsten, ¾ hp.
Temperature	0ºC to 40ºC, (32ºF to 104ºF)
Humidity	15% to 95% R.H. (non-condensing)
Location	Indoor use only

RightPlug

Interface	ISO 14443 type B
Frequency	13.56 MHz
Power	< 90mW
Read Range	< 10mm

Limited Warranty Information

Disclaimer

2D2C, Inc.'s products are warranted to be free from defects in material or workmanship for thirty (30) days from the date of sale to the original purchaser.

THE FOREGOING LIMITED WARRANTY IS 2D2C, INC'S SOLE AND EXCLUSIVE WARRANTY AND THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY. 2D2C MAKES NO OTHER WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED AND EXCLUDED TO THE MAXIMUM EXTENT ALLOWABLE BY LAW.

2D2C, Inc's liability arising out of the manufacture, sale or supplying of products or their use or disposition, to the extent allowed by law, whether based upon warranty, contract, or otherwise, shall be limited to the price of the product. Where allowed as a matter of law, 2D2C, Inc. shall not be liable for special, incidental or consequential damages (including, but not limited to, loss of profits, loss of data or loss of use damages) arising out of the manufacture, sale or supplying of products, even if 2D2C, Inc. has been advised of the possibility of such damages or losses.

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How SafePlug Works

Fire Prevention
SafePlug® electrical outlets protect against fires ignited by hot electrical junctions and wires via an **Overload Fault Circuit Interrupter (OFCI™).** The OFCI disconnects electricity to electrical device loads when it detects high power dissipation in wire connections in the wall, excess voltage at the outlet, or excess current flow to a device plugged into the outlet. If line voltage exceeds 127 VAC, the OFCI disconnects power to both receptacles to prevent either load from overheating and igniting.

To detect excess current, the OFCI first reads the normal current from the RightPlug™ compliant tag attached to the device plug. The OFCI uses this information to automatically adjust its trip threshold to match the device. If the device draws excess current, the OFCI disconnects power to the device. OFCI also monitors the total current flowing through the outlet and trips off loads if it measures more than 15 Amperes total drawn. The OFCI continuously monitors these electrical conditions, 24 hours a day, 7 days a week.

Shock Prevention
SafePlug electrical outlets protect against electrical shocks via a **Shock Fault Circuit Interrupter (SFCI™)**. SFCI keeps electricity normally OFF at each outlet receptacle. SFCI will only deliver electricity to a RightPlug equipped cord-set. SFCI will not deliver electricity to anything else inserted into the receptacle. SFCI prevents children from experiencing electrical shocks if they insert foreign objects into a SafePlug outlet.

Appliance Damage Prevention
SafePlug electrical outlets use a **Power Fault Circuit Interrupter (PFCI™)** to protect appliances and electronic devices from damage caused by poor power quality. PFCI protects electrical devices against power line surges, high line voltages (> 127 VAC), and low line voltages (< 106 VAC). PFCI disconnects the poor power conditions before they damage devices. PFCI delays power ON to electrical devices for 15 to 30 seconds after proper line voltage returns to reduce device exposure to power cycling (common after a black out). There is a 2 second delay from powering ON the first receptacle to powering ON the second receptacle to minimize total inrush current from motorized loads.

Features and Components

Front View:
A) SafePlug Outlet: Duplex receptacles with automatic on/off control of power independently to each receptacle for fire, shock and power-fault protection. Limits the maximum current to 15 Amps for each receptacle and for the entire outlet. SafePlug outlets only connect power to a receptacle when a RightPlug cord set is inserted.

B) Receptacles: Each operates independently for maximum protection. Each receptacle reads RightPlug safety data from the inserted electrical device plug and sets its safety trip level accordingly. Each receptacle keeps power off when the receptacle is empty.

C) Status Indicators: A red and green light adjacent to each SafePlug outlet receptacle indicates its status. See "SafePlug 1300 User Guide" for details.

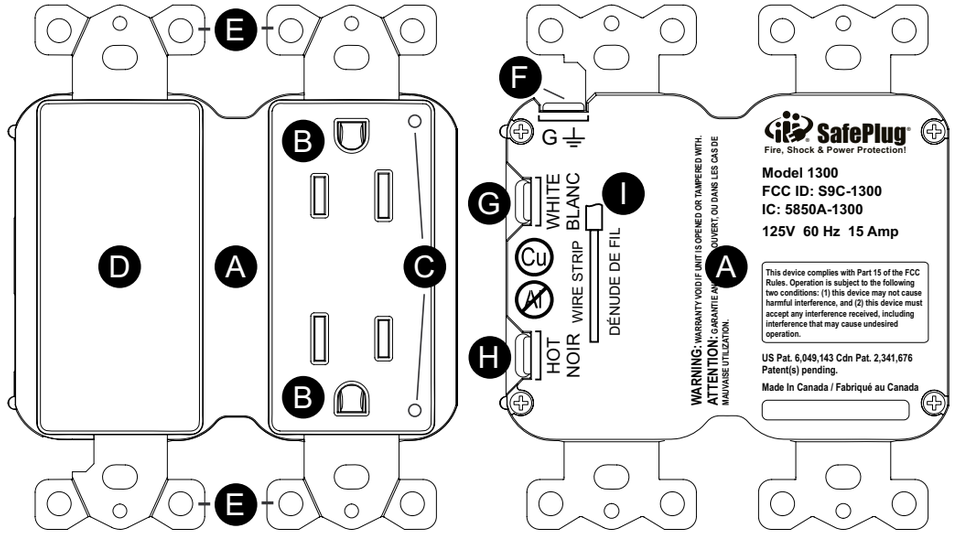
D) Relay Compartment: House two disconnect relays, one for each receptacle.

E) Mounting Bracket: Allows a SafePlug outlet to be securely fastened into a double-wide case.

Back View:
F) Grounding terminal for bare copper or green wire (Green)

G) White terminal for common wire (White)

H) Hot terminal for line wire (Black)



I) Wire Stripping Gauge: To measure the proper length of wire end to strip insulation from.

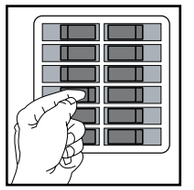
Installation Instructions

You should be a qualified electrician to install SafePlug outlets. Read the instructions completely before beginning to install. Installing a SafePlug outlet can be more complicated than installing a conventional receptacle.

Make sure that you:
1) Understand basic wiring principles and techniques.
2) Can interpret wiring diagrams.
3) Have circuit wiring experience.
5) Test your work to make sure that you have wired the SafePlug outlet correctly.

Step #1: Prepare
SafePlug Model 1300 has only one Line connection. SafePlug Model 1300 cannot be split into one switched receptacle and one non-switched receptacle. It cannot be split to support more than 15A current draw through the two receptacles combined.

A) Locate your service panel/ fuse box. Place the breaker for the circuit you are working on in the OFF position or remove the fuse. Make sure the power is OFF before continuing.



B) SafePlug outlets require a double-wide, 3" deep, electrical box. Standard outlets have single size electrical boxes. Install a double-wide electrical box at the desired location. Feed the circuit wires into the box and secure them according to the local Electrical Code.

C) Test the voltage at the double-wide outlet box between the black and white Line Cable wires with a circuit tester to make sure the power is OFF. If the power is not off locate the correct circuit breaker and disconnect power.

Step #2: Connect the wires
The Line cable consists of 2 or 3 wires and delivers power from the service panel (through a 15Amp circuit breaker or fuse) to the SafePlug outlet. If only one cable enters the electrical box, it should be the Line cable.

For installation in series with a circuit (multiple SafePlug outlets in a series) see **Drawing A**. For installation of a terminating circuit see **Drawing B**.

Connect the black, white and ground circuit wires to the SafePlug outlet as follows:

A) Strip the insulation 7/8 inch (2.22cm) back from the end of each of the wires. Use the wire gauge on the back panel of the SafePlug outlet.

Use the following procedure to connect each wire to the SafePlug outlet terminals:

- Wrap stripped end (bare copper) clock wise, 2/3 of the way around the terminal screw.
- Tighten screw firmly. Use no more than 12 inch-pounds of torque to tighten the screws.

B) Connect the Line cable wires to the SafePlug outlet terminals:
- Connect the white wire to the SafePlug outlet White terminal.
- Connect the black wire to the SafePlug outlet Hot terminal.

C) Connect the ground wire to the SafePlug Ground terminal.
- For a box with a grounding terminal (Drawing A and B), connect a 6-inch bare copper (or green) 14 AWG wire to the grounding terminal on the SafePlug. Also connect a similar wire to the grounding terminal on the box. Connect the ends of these wires to the Line cable's bare copper (or green) wire using a wire connector. If these wires are already in place, verify the connections.
- For a box with no grounding terminal (Drawing not shown), connect the Line cable's bare copper (or green) wire directly to the grounding terminal and the SafePlug outlet.

Step #3: Complete the installation
- Fold the wires in the box, keeping the grounding wire away from the White and Hot terminals. Screw the outlet to the box and attach the faceplate.

Testing and maintenance procedures

Test the disconnect capability of each SafePlug outlet once per month. To test the SafePlug outlet, perform the following steps:

A) Turn the power ON at the service panel for the SafePlug outlet.

B) Plug in an electrical device with a RightPlug equipped cord into the top SafePlug receptacle. Within 5 seconds after plug insertion, look for a green "active" light to turn ON next to that receptacle and listen for the “click” of the power relay as it turns ON.

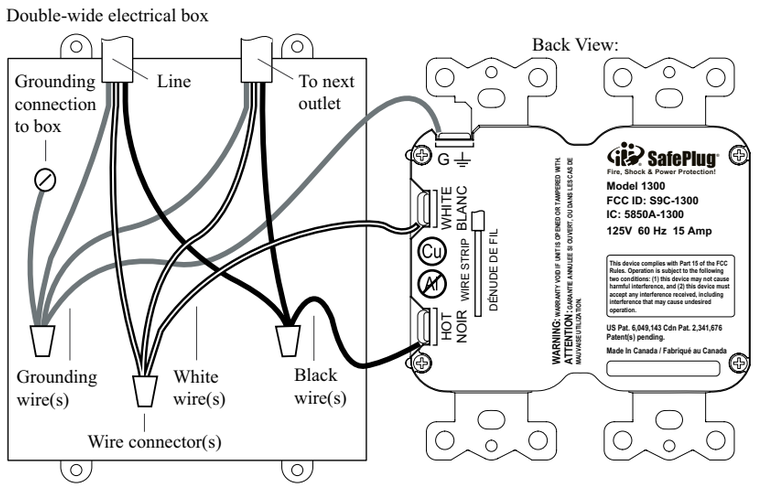
C) Unplug the RightPlug cord. Look for the green light to turn OFF and listen for the “click” sound as the power relay turns OFF.

D) If you do not see the light toggle, then the plug may not be RightPlug encoded or no power is applied to the SafePlug outlet circuit. Check the plug and check the service panel.

E) If you see the light, but do not hear the “click”, then either no power is applied to the circuit or the SafePlug outlet has been severely damaged. Ensure power is applied to the circuit. If the problem persists, replace the SafePlug outlet.

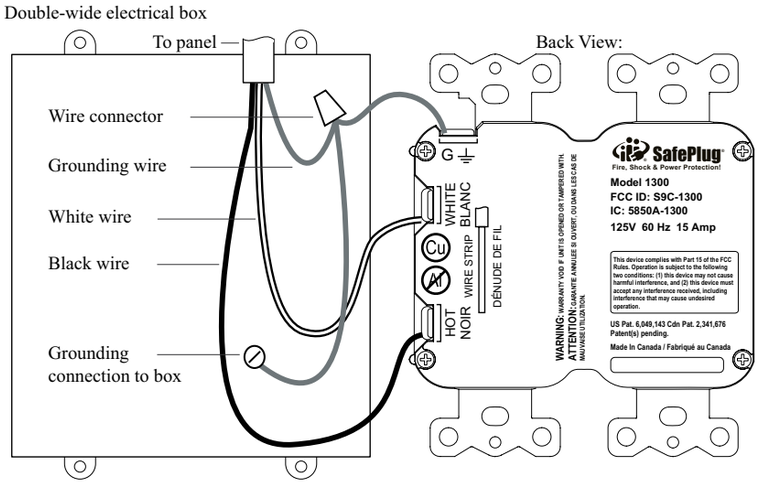
F) Repeat steps 2-5 for the lower SafePlug outlet receptacle.

Drawing A: In Series with Circuit

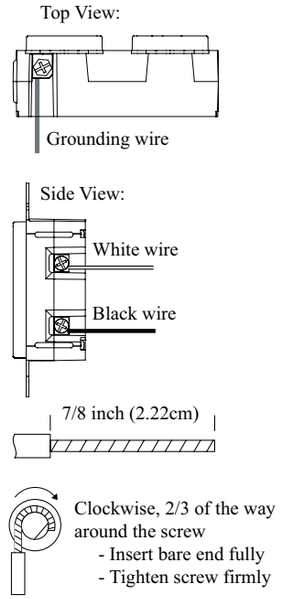


Use only one 14 AWG wire on each SafePlug Model 1300 terminal.

Drawing B: Circuit Termination



Connecting Wires



Troubleshooting Using Status LED's

	LIGHT CONDITION	WHAT DOES THE CONDITION MEAN?	RECOMMENDED ACTION
GREEN	**SOLID GREEN** next to a receptacle.	SafePlug Model 1300 electrical outlet has detected a plug with RightPlug encoding or with a SafePlug Model 10XX Tag attached. The SafePlug Model 1300 electrical outlet power is ON for that appliance. Power line voltages are within an acceptable range and the electrical device current draw is within its RightPlug stored safety limit.	No action is required.
RED	One **FAST-FLASHING RED** light next to a receptacle	SafePlug Model 1300 electrical outlet has automatically disconnected power at that receptacle. The electricity drawn by the electrical device plugged in exceeded the safe limit (stored in and read from the RightPlug cord-set).	Turn off and unplug the appliance. Inspect it for damage. If it is a lamp, check that the proper wattage light bulb is installed. If the problem continues stop use of the electrical device in question and have it replaced or repaired.
	One **SOLID RED** light next to one receptacle only	RightPlug cord-set or SafePlug Model 10XX Tag is damaged or contains invalid safety information.	Remove & discard the SafePlug Model 10XX Tag and replace it with a new one.
	Two RED lights, with one short FLASH every 10-15 seconds next to both receptacles	The SafePlug Model 1300 electrical outlet detected a power fault (high/low line voltage or long duration surge) and disconnected power at both receptacles to protect the appliance.	No action required. The SafePlug Model 1300 will turn power ON when good power quality returns.
	Two RED lights, flashing continuously next to both receptacles	SafePlug Model 1300 electrical outlet has detected an internal fault or has reached the end of its useful service life.	Replace the SafePlug Model 1300 electrical outlet.
NO LIGHT	**NO LIGHT** (Power is OFF)	**A)** Plug is not RightPlug compliant, OR **B)** RightPlug compliant cordset not properly inserted in the SafePlug receptacle, OR **C)** RightPlug compliant Tag damaged, OR **D)** SafePlug outlet has no power.	**A)** Retrofit a SafePlug Model 10XX compliant tag to the appliance plug. **B)** Fully insert plug into SafePlug electrical receptacle. **C)** Replace the SafePlug Model 10XX Tag. **D)** Verify the power is turned on. If problem persists have a qualified electrician inspect the electrical circuit.