



EMFSafeSwitch Designed and Manufactured by EMFSafe

Installation And Operating Instructions

Note: There is a pictorial guide to installation on our website “technical” page that may be helpful.

Warning: All models of the EMFSafeSwitch should be installed by a professional electrician familiar with electrical wiring and codes. EMFSafe, Inc. accepts no responsibility for accidents, damages or personal injury caused by incorrect installation. These units are designed for surface of flush mounting *INDOORS* only, unless you purchased our “3R” outdoor rated enclosure. **Caution:** These units are rated at 20 A per Branch Circuit.

Technical support: EMFSafe 541-538-9529 (we are on PST)

Other Requirements:

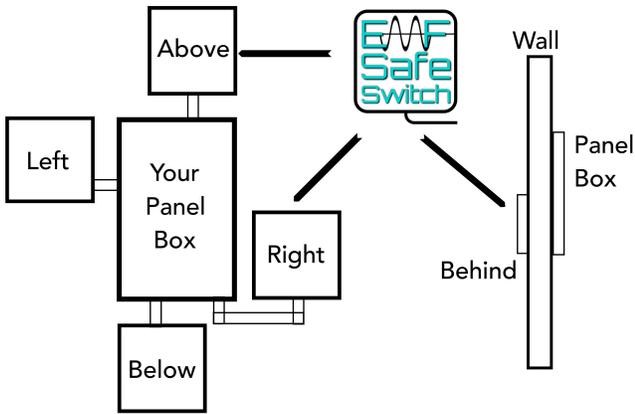
1. On EMFSafeSwitch **WITHOUT** PQFilter™ - 1 independent 120 VAC 20 A or 15 A rated single pole circuit breaker will be required to power the EMFSafeSwitch unit.
2. On EMFSafeSwitch **WITH** PQFilter™ - a **240 VAC, 2 pole 15A circuit breaker** will be required to power the EMFSafeSwitch unit. Wires labeled PWR go to the 2 pole circuit breaker, NEU to neutral bus bar GRN to ground bus bar. **For optimum “DE” filtration keep the power & neutral wires as short as possible.**
3. Circuit breakers should be marked to indicate which circuits are to be turned off and each assigned a sequential number starting with the number 1. The highest number should correspond to the number of circuits your EMFSafeSwitch is capable of handling.
4. If the NP (Neutral & Power) wiring option is being used the 1 NP circuit to be assigned to each relay needs to be marked.
5. With the PO (Power Only) option up to 2 PO circuits to be combined in each relay need to be marked. They will be switched at the same time. EG - plugs and lights from the same room. See page 2.

Installation Procedure:

IMPORTANT: Please read this entire procedure before beginning installation. **WARNING: For SAFETY, turn OFF the MAIN circuit breaker in the main electrical panel BEFORE starting installation. Remember the wiring ahead of the Main is still HOT even with the main breaker turned off.**

1. The EMFSafeSwitch can be installed on either the left or right side of the load center (main electrical panel). The EMFSafeSwitch is provided with a flexible conduit connection (unless you purchase our flush enclosure which only comes with the pre-wired pigtail). The pre-wired pigtail of the EMFSafe Switch will normally connect to the home’s main electrical panel thru one of the bottom or lower knockouts of the main electrical panel enclosure.
2. **Caution:** To prevent damage to wire harness, do not rotate flexible conduit more than 90 degrees left or right of centerline of EMFSafeSwitch enclosure.
3. While holding the unit against the wall, attach the flexible conduit of the EMFSafeSwitch to the home’s main electrical panel. Permanently anchor the EMFSafeSwitch against the wall by using screws thru the designated anchor points in the back of the enclosure.

Note: Be careful not to put excessive stress on the flexible conduit and at the EMFSafeSwitch.



Ensure that at the termination of the wire harness that there is no excessive twisting or strain on the wires.

“BC” = Branch Circuit, “CB” = Circuit Breaker, numbers refer to circuits, letters correspond to relays

4. After mounting the unit to the wall, you are ready to terminate the wires from the EMFSafeSwitch unit to each circuit breaker and branch circuit. All **BLACK** wires are marked **CB** for termination into the circuit breaker and will have a corresponding **RED** wire for the corresponding home’s branch circuit marked **BC**. Each of these wire pairs will have a sequential number to indicate

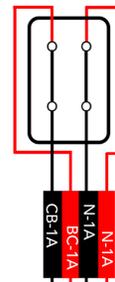
which internal contact the EMFSafe Switch is using. These pairs should be kept together for each circuit you are switching off.

Example: You are using a EMFSafeSwitch PO-8 which can switch off 8 (power only) circuits. There will be 8 pairs of wires each labeled 1 thru 8. Each pair will have CB for the circuit breaker and a BC for the branch circuit. You should have up to 8 circuit breakers in your load center (main electrical panel) pre-- marked indicating what circuits you are switching off and whether they are going to be zoned.

5. At the load center, start with number 1 wire pair from the EMFSafeSwitch wire harness and find the corresponding number 1 circuit breaker that was previously marked. Remove the wire from the circuit breaker and inset the new black wire labeled **CB-1A** back into this breaker and tighten. On the branch circuit wire removed from the circuit breaker previously, using a wire connector, connect this wire to the wire labeled **BC-1A**. Repeat this procedure for the rest of the wires in the harness.
6. For NP (Neutral & Power) wiring option the circuit neutral is being switched at the same time. Remove circuit neutral (e.g. - BC-1A) from the neutral bus bar, connect to the corresponding **WHITE** (N-1A) wire from the pig tail to the neutral bus bar and using a wire connector, connect circuit neutral to the other **WHITE** N-1A. Does not matter which neutral goes to neutral bus bar or branch circuit. The neutral and power of the branch circuit you are switching have to be on the same relay. We recommend with the switch both activated and not activated that you check all receptacles, both controlled by the unit and not controlled by the unit for proper polarity using a polarity checker.
7. If everything was properly connected as described in the previous step, for a switch **without** PQFilter™ there should be just 3 wires left to connect (unless you did not use all of the potential circuit controllers in our unit). These wires are used to provide power to EMFSafeSwitch using the dedicated circuit described in the requirements section and a ground. The **GREEN** wire should go to the ground bus, the **WHITE** wire to the neutral bus and **BLACK** wire labeled **PWR** to the circuit breaker. **Keep the power and neutral as short as possible.** With all the wires hooked up, go back and check that each wire is at the correct location and everything is terminated properly. **DO NOT POWER UP UNIT. . .**

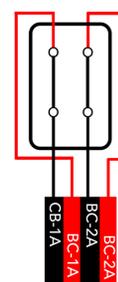
Wiring options for 2 pole relays

Neutral & Power



1 Neutral & Power circuit

Power Only



2 Power Only circuits

RELAYS ARE NORMALLY CLOSED (NC)

Relay A

Note: If there are any unused wires from the EMFSafeSwitch in the main electrical panel, cover them with wire nuts.

8. Reinstall the main electrical panel cover and turn on the main breaker. At the home's main electrical panel, ensure that all the circuit breakers that are to be controlled by the EMFSafeSwitch are in the ON position. Confirm (by checking lighting and receptacles) that power is restored to all the areas of the home that the EMFSafeSwitch will be controlling. Do not proceed if power was not restored to these areas. Stop and shutdown the main breaker and determine the issue. If all the power was restored, turn on the circuit breaker used to POWER the EMFSafeSwitch. At this point you should see a light on the RF remote control unit indicating it is ON.
9. Your EMFSafeSwitch RF remote is pre-setup at the factory and you should be able to turn off and on your desired mitigated areas with the remote. If you are controlling 1 zone use button labeled A on the FOB. If you are using 2 zones, the button labeled B will control the other mitigated area.

How to set Flex Zones

The NP-1/1 or PO-2/1 has 1 control zone.
(No Flex zone)

The NP-2/2 or PO-4/2 has 2 Flex zones.

The NP-4 or PO-8 & the NP-8 or PO-16 can have 2 or 4 Flex Zones. These can be assigned by the customer in the following way:

2 Flex Zones.

NP-04 (PO-8) - has 4 relays A, B, C & D &
NP-08 (PO-16) has 8 relays A, B, C, D, E, F, G & H each relay has a zone allocation switch that can be in 1 of 2 positions. See Photo

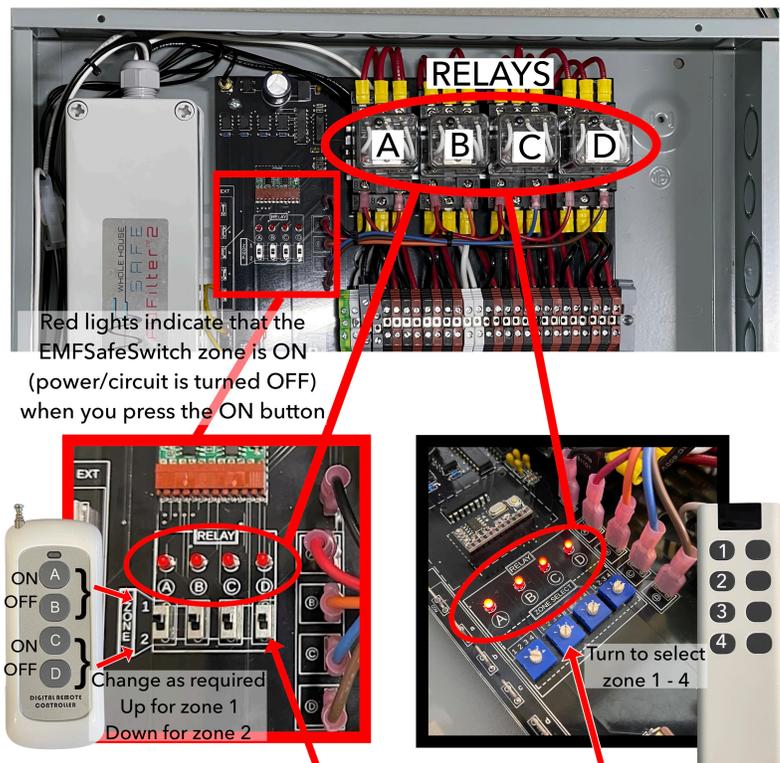
“Up” assigns the relay (and associated circuit breakers) to zone 1.

“Down” assigns the relay (and associated circuit breakers) to zone 2.

4 Flex zones.

Again each relay has a zone allocation, this time it is a dial and can be in 1 of 4 positions. Simple assign each relay (and the associated circuit breakers) to either zone 1, 2, 3 or 4.

You can change the relay (circuit breaker) to zone assignment at any time. Children grow up, child leave home or come home having been a way. You decide to set up a home office or to move your home office to another room. Now you can program your EMFSafe Switch to suit your daily/weekly requirements without calling an electrician or EMFSafe.



1 Zone

NP-1/1 (PO-2)
NP-2/1 (PO-4)

2 Flex Zones

NP-2/2 - (PO-4)
NP-4/2 - (PO-8)
NP-6/2 - (PO-12)
NP-8/2 - (PO-16)

4 Flex Zones

NP-4/4 - (PO-8)
NP-6/4 - (PO-12)
NP-8/4 - (PO-16)

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