

Does the core switch need a ground wire



Overview

WARNING: This equipment must be grounded. In a small SOHO environment where there are, say, 4-5 systems and each system is grounded, is it also necessary to ground the network equipment, that is, the network cable and the switch?

If yes, how it is/can be achieved?

Most of the low-cost switches I have seen, like say this one or this one. after experimenting a bit i found that the resister to ground is nececarry because the arduino wil otherwise think the switch is being activated, why is this?

i get the resistor but why is a cable to ground nececarry?

after expirimenting a bit i found that the resister to ground is nececarry becase. The switch chassis is automatically grounded when you install the switch properly in a grounded rack with metal-to-metal connections between the switch and rack. Alternatively, you can ground the chassis (this is required if the rack is not grounded) by attaching a customer-supplied grounding cable. Many electronics that use a high amount of electricity need to be grounded for the sake of helping prevent electrical shock and providing a path for electrical faults to safely dissipate. If you were to come into contact with an electrical component that were to fault, and there was not a ground. Shielded Ethernet cable (STP) has to be grounded regardless. Ethernet switches and routers with a POE port and POE injectors have to always be grounded because a surge is possible.

Article Content

Hot

Grounding a switch? : r/HomeNetworking

Grounding is complicated and generally not useful in a home context. I recommend you leave the grounding unconnected unless you use shielded cables and connectors and that would be their only

Jun 18, 2026 Hot

Do You Have To Connect Ground Wire: Essential Safety

Do you have to connect a ground wire? Yes, absolutely. Connecting the ground wire is a critical safety step for most electrical fixtures and appliances.

Jun 25, 2026 Hot

How to Properly Connect a Light Switch Ground Wire

Step-by-step guide to safely connecting the ground wire on any light switch, including solutions for ungrounded electrical systems.

Jan 04, 2026 Hot

Grounding the switch

The switch chassis is automatically grounded when you install the switch properly in a grounded rack with metal-to-metal connections between the switch and rack.

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What Is a Core Switch in a Network?

Define the core switch—the central, high-speed backbone required for aggregating and routing massive volumes of enterprise network traffic.

Nov 02, 2025 Hot

How to Ground a Light Switch | 10 Easy Methods (2026)

Installing a light switch is a fundamental task in any electrical installation, but ensuring it is properly grounded is equally essential for safety and

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Why does a switch need a ground connection

wire to pin 2 and put a 10k resistor to ground. after experimenting a bit i found that the resistor to ground is necessary because the arduino will otherwise

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What Is a Core Switch?

A core switch is the backbone of a large-scale network, designed to handle massive volumes of traffic with ultra-low latency and maximum reliability. Sitting at the top of the hierarchical model, core

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How to tell "ground" hole on reset and power switch

Newbie David here,I have a Thermaltake Core V41 new case and an ASRock MB. The motherboard is clearly marked for the insertion of the Reset and power switch cables with the

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networking

For a consumer-grade desktop switch in a plastic shell like the

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Grounding networking devices?

Not ideal. Ground wire typically only carry voltage in case of a fault. Like say, a rat eats up your washing machine's wires, causing them to touch the metal chassis. Typically, the voltage going

Mar 21, 2026 Hot

Why do some switches require a ground wire? : r/NoStupidQuestions

I know about the safety aspect, but I'm wondering how it is functionally required for some switches. They seem to somehow be using the ground to operate, not just when there's an issue.

Sep 03, 2025 Hot

Why does a switch need a ground connection

It is necessary to "pull" the input to a "non-floating" state, so that when the button is pushed the pin goes HIGH, when it is released it goes LOW. Not to

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Networking question related to grounding. What is true and ...

Ethernet switches and routers with a POE port and POE injectors have to always be grounded because a surge is possible. Adding a ground after the fact is redundant and unneeded on a network that has

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Is a ground required when replacing an old light switch?

Because you are replacing the switch, not installing a new switch, you can get away without a ground. You should install a nonconducting, noncombustible faceplate

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electrical

I'm trying to install a new light switch from a plastic one to a metal one. I don't have a ground wire nor is the back box grounded. Do I need to connect it to a ground?

Feb 13, 2026 Hot

Does a light switch ground wire need to be connected to other ...

I'm replacing a simple two-way light switch with a smart dimmer switch, and I'm not sure how to handle ground wire, which the old switch didn't use

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Understanding What a Ground Wire is and Why it Matters

Understanding What a Ground Wire is and Why it Matters Knowing and understanding what a ground wire is and why it matters is incredibly important.

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Grounding the Switch

Prepare the other end of the grounding wire and connect it to an appropriate grounding point in your site to ensure an adequate earth ground for the switch. If the rack is fully bonded and grounded, connect

Sep 22, 2025 Hot

Do Light Switches Need To Be Grounded?

Light switches are a major feature in the electrical system of a home. They are located in every room and some rooms have multiple

Aug 24, 2025 Hot

Understanding the Core Switch: Key Differences and Uses

Explore the core switch's role as the backbone of your network. Discover key differences, uses, and insights into layer 3 core switch technology.

Apr 22, 2026 Hot

Light Switch Grounding: What to Do If Yours Has No Ground

No ground wire on your light switch? Learn how to check the wiring, spot old systems, and when to use GFCI or upgrade safely.

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Core Switch Explained: Key Functions and Benefits

Core switches are crucial in effective network design. They stand at the network's heart, speeding up data transfer across different segments. Unlike edge switches, core switches are the

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Ground Wire: What Exactly Does a Ground Wire Do?

How to Add a Ground Wire to an Outlet Adding a ground wire to an outlet is a potentially hazardous task and should be done by a trained electrician. It typically involves: Running a new

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Does you use the grounding points on your switches/routers ...

Grounding the case directly stopped this problem. Our core network equipment is almost all -48VDC powered. You need a separate safety ground on a DC system since your power cables don't include

Jan 07, 2026 Hot

Do You Have to Ground a Light Switch? Here's What You Need to Know

Wondering if you have to ground a light switch? Learn the essential safety tips and electrical codes to ensure your light switch is properly grounded. Discover when grounding is required and how it

Dec 04, 2025

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