Blade fuse panel

Evaluate your electrical experience. Even when unplugged, a microwave contains high-voltage capacitors that can cause serious injury or death. Although fuse replacement is easy but not necessarily safe , a blown fuse is often a sign of other electrical problems which may be difficult for a layman to handle. If you are not experienced with electrical repair, hire a professional. Take safety precautions. Microwaves are among the most dangerous household items to repair. Protect yourself before you begin: Remove all jewelry and watches, which could snag on components and conduct electricity. Magnetic microwave components may damage some watches. Wear rubber soled shoes and consider wearing insulated gloves. Have someone nearby to call emergency services if necessary. Take care not to touch any metal parts within the microwave, especially circuit boards and capacitors. Unplug the microwave. If your microwave is mounted under a cabinet, the power cord is usually threaded through the overhead cabinet. Remove the vent grille. The vent grille is usually located at the top of the microwave, attached with a couple screws on the upper surface. After removing the screws, unhook the plastic tabs by sliding the grille usually left or upward. Set it aside. Label all screws with their original location. On some models, you'll need to open the microwave door to access the grille. You may not need to remove this rear grille to remove the other panels, but there could still be a fuse behind it. Detach the control panel. Look for screws on the side of the control panel revealed by the grille removal. Also remove any screws on the upper surface of the panel. Lift the control panel and pull forward to detach it. Remove exterior panels if necessary. You now have access to some but not all of the microwave's interior. You may look for an electrical problem now, or unscrew and remove the remaining panels for full access. Part 2 of Wait several minutes recommended. The capacitor can hold a potentially lethal charge even when the microwave is unplugged. Although the charge is supposed to drain when the microwave is turned off, this may take several minutes. Even after waiting, do not assume the capacitor is safe. This safety feature may have failed, or may not be present in your model. Locate the capacitor. In most models, the capacitor is a metal cylinder with two or three electrical terminals. If you cannot identify the capacitor, hire a professional repairman. Never disassemble interior components to look for it. Do not touch any part of the inverter board that contains the capacitors. The aluminum heat sink, windings, and choke coil are all high voltage. Choose a screwdriver with an electrically insulated handle. You may also wish to wear insulated gloves, especially if you are not sure what voltage the handle is rated for. Voltages up to volts may be present. Clip a resistor to the screwdriver tip. This will slow the rate of discharge, preventing damage to your screwdriver or microwave components. Clip the other end to the metal chassis. Attach the other end of the resistor to the metal chassis of the capacitor, using an alligator clip. Insulated gloves are recommended for this step to avoid brushing against the terminals of the capacitor. Touch the screwdriver tip to one terminal of the capacitor. Hold it there for a few seconds while the charge drains. According to the GE service manual for a JES series microwave, you may discharge at the magnetron filament terminal instead. Repeat with the other terminal. Confirm the clip is still grounded, then touch the screwdriver tip to the other

terminal. Repeat with the third terminal if present. Check for charge. Withdraw the screwdriver and unclip the resistor. Touch the screwdriver tip to one terminal, then slide it to the other. If there is a popping noise or spark, the capacitor has not discharged properly. Never test for voltage using a standard multimeter. They are not made to handle the extreme voltage found in microwaves. Part 3 of Check for obvious problems. A blown fuse is usually a sign of an electrical fault. Perform a visual inspection for scorch marks, dead insects or other debris causing a short circuit, and broken or leaking components. If any of these are present, you will likely need to replace or repair additional parts besides the fuse. There are many possible causes for a blown fuse, and these are not covered in this guide. One common cause is a broken door interlock switch, which may require replacing several door components or realigning the door. If you cannot identify the broken part or do not know how to handle high-voltage equipment safely, hire a professional repairman. Locate the fuses. Your microwave may have two types of fuse. Their exact location depends on your model, but check behind the control panel. Some fuses may be hidden by other components. Remove the fuses safely. Pop out the fuses with a fuse puller or the tip of a screwdriver with a well-insulated handle. To remove thermal fuses, pull the wires off the prongs. Make a note of where each fuse came from. Test the fuses with a multimeter. Most microwave fuses do not look any different after they are blown. To test them, set your multimeter dial to the continuity test if present, with the symbol. Otherwise, set it to the lowest Ohm setting. Test the fuse resistance: Touch the two probes together. You should hear a tone if the multimeter is set to continuity. If set to measure resistance, the multimeter should read 0 Ohms. Analog multimeters may need calibration. Touch the two probes to opposite ends of the fuse. If the multimeter reads 0 Ohms or you hear a continuity tone, the fuse is working. If the multimeter measures resistance or displays "OL" for overload, or if there is no continuity tone, the fuse is blown. Replace the fuse with an identical component. The fuse must be exactly the same size and have the same amperage rating as the original. This information should be displayed on the fuse, although you may need a magnifying glass to read it. Pop the new fuse back in with the fuse puller or insulated gloves. Buy a couple spare fuses. If there is an underlying electrical problem, the new fuse could blow as well. Reassemble the microwave. Replace all panels and screws in the reverse order you removed them. Check all tabs around the edge of panels to make sure they fit securely in their slots, without pinching any wires. Improper reassembly could cause radiation to leak out of the microwave during operation. Make sure all screws are in their original position, as some may be responsible for grounding the cover. Place something inside the microwave before testing to avoid overheating. Look for it from the right side, near the top of the microwave. If the replacement fuse blows as well, you may need to replace the monitor switch near the lower edge of the door locking mechanism. Not Helpful 6 Helpful Unplug the device, then check the user manual for the fuse location. Use a fuse puller to pull out the bad fuse, then replace it with a good one. Not Helpful 2 Helpful 2. You will have to remove the outer metal shell to access the interior. Generally, microwaves just quit and you have to buy a new one. Not Helpful 16 Helpful The fuse in the JJES model is located inside the microwave. Not Helpful 11 Helpful 4. Not Helpful 15 Helpful 6. The number should be located in the owner's manual you received when you bought the microwave. If you don't have it, call the manufacturer. Not Helpful 16 Helpful 0. Unanswered Questions. What do I do if my microwave won't come on and light up? What does it mean if my GE microwave is making a humming noise after replacing the fuse? I understand amperage, but is it ok to replace v glass fuses with v glass fuses of the same rating? Include your email address to get a message when this question is answered. If you are having trouble with the repair, consider purchasing a new microwave. This is often cheaper than hiring a professional, at least for countertop models. Helpful 0 Not Helpful 1. If the microwave was purchased from GE within the pas year, the warranty will likely cover this repair. Call and have your model and serial numbers ready. Helpful 0 Not Helpful 0. Submit a Tip All tip submissions are carefully reviewed before being published. Do not test high-voltage components with an ordinary multimeter. Helpful 2 Not Helpful 1. Microwaves operate at very high voltages, and remain very dangerous even when unplugged. Read these instructions carefully to minimize danger. Helpful 1 Not Helpful 1. Never work on a microwave while it is plugged in. Never touch any microwave component while it is running, even with an insulated tool. Related wikiHows How to. How to. More References 7. About This Article. Co-authored by:. Co-authors: Updated: March 23, Categories: Microwave Ovens. Thanks to all authors for creating a page that has been read , times. Did this article help you? Cookies make wikiHow better. By continuing to use our site, you agree to our cookie policy. Related Articles How to. By signing up you are agreeing to receive emails according to our privacy policy. Follow Us. X Help us do more We've been helping billions of people around the world continue to learn, adapt, grow, and thrive for over a decade. Let's do this! Electric fuse was invented by Thomas Alva Edison in There are many

types of fuses, but the function of all these fuses is the same. In this article, we will discuss the different types of fuses, its construction, working and operation and their application in various electronics and electrical systems. Related Posts:. A general Fuse consists of a low resistance metallic wire enclosed in a non combustible material. It is used to connect and install in series with a circuit and device which needs to be protected from short circuit and over current, otherwise, electrical appliance may be damaged in case of absence of the fuse and circuit breaker as they are unable to handle the excessive current according to their rating limits. Whenever a short circuit, over current or mismatched load connection occurs, then the thin wire inside the fuse melts because of the heat generated by the heavy current flowing through it. Therefore, it disconnects the power supply from the connected system. In normal operation of the circuit, fuse wire is just a very low resistance component and does not affect the normal operation of the system connected to the power supply. While selecting the proper fuse and its rated size for electrical appliances is based on different factors and environments. But the following basic formula shows how to choose the right size of fuse? For example, you have to find the right size of fuse for 10A two pin socket. But you should go for the max i. Different types of fuses can be categories on the following characteristics. Below is the brief explanation of the above categories. Current carrying capacity is the amount of current which a fuse can easily conduct without interrupting the circuit. Breaking capacity:. The value of maximum current that can safely be interrupted by the Fuse is called Breaking Capacity and should be higher than the prospective short circuit current. Expect the current capacity of current, there is the maximum voltage rating a fuse can handle safely. Each fuse has maximum allowed voltage rating, for example, if a fuse is designed for 32 volts it cannot be used with volts, different amounts of isolation is required in different fuses working on different voltage levels. It is the amount of energy which carries the fuse element when the electrical fault is cleared by the fuse element. The speed at which the fuse blows, depends on the amount of current flowing through its wire. The higher the current flowing through the wire, faster will be the response time. Response characteristic shows the response time for an overcurrent event. Fuses which respond rapidly to the over current situation is called ultra fast fuses or Fast fuses. They are used in Many semiconductor devices because semiconductor devices are damaged by over current very rapidly. There is another fuse which is called a slow burn fuse , switch fuses do not respond rapidly to the over current event, but blow after several seconds of over current occurrence. Such fuses found their application in motor control electronics systems because motors take a lot more current at starting than running. As we have mentioned above, AC and DC fuses have a little bit different packaging type, in the same way different applications require different packages to be used accurately in the circuit. One time use fuses contain a metallic wire, which burns out, when an over current, over load or mismatched load connect event occurs, the user has to manually replace these fuses, switch fuses are cheap and widely used in almost all the electronics and electrical systems. On the other hand, the Resettable fuse automatically reset after the operation when fault occurs at the system. In the Current limiting fuse, they produce high resistance for a very short period while the non â€" current limiting fuse produces an arc in case of high current flow to interrupts and limit the current in related and connected circuits. There are different types of fuses available in the market and they can be categories on the basis of Different aspects. Click image to enlarge. Fuses can be divided into two main categories according to the type of input supply voltage. In a DC system, when the metallic wire melts because of the heat generated by the over current, then Arc is produced and it is very difficult to extinguish this arc because of DC constant value. So in order to minimize the fuse arcing, DC fuse are little bigger than an AC fuse which increases the distance between the electrodes to reduce the arc in the Fuse. On the other hand, I. Therefore, AC fuses are a little bit small in sizes as compared to DC fuses. Fuses can also be categorized based on one time or multiple Operations. Cartridge fuses are used to protect electrical appliances such as motors, air-conditions, refrigerator, pumps etc. where high voltage rating and currents are required. They are available up to A and V AC and widely used in industries, commercial as well as home distribution panels. There are two types of Cartridge fuses. General purpose fuse with no time delay and 2. Heavy-duty cartridge fuses with time delay. D-Types fuse contains an adapter ring, base, cap and cartridge. Fuse base is connected to the fuse cap where the cartridge is inside the fuse cap. The circuit is completed when the tip of the cartridge makes contacts through the fuse link conductor. We have already discussed in very details about HRC fuse High Rupturing Capacity construction, operation and their applications. Related Post:. High Voltage HV fuses are used in power systems to protect the power transformer , distribution transformers and instrument transformer etc. High Voltage fuses are rated for more than V and up to 13kV. The element of High Voltage fuse is generally made of copper, silver or tin. These types of fuses also known as spade or plug-in fuses come in plastic body and two

metal caps to fit in the socket. Mostly, they are used in automobiles for wiring and short circuit protection. The rating of automobile fuses are low as 12V to 42V. Types of HRC Fuses. The most famous kit-kat fuse also known as rewireable fuse mostly used in industries and home electrical wiring for small current applications in Low Voltage LV systems. Rewireable fuse contains 2 basic parts. The inner fuse element as fuse carrier made of tinned copper, Aluminum, Lead etc and the base made of porcelain having the IN and OUT terminals which is used to be in series with the circuit to protect. The main advantage of a rewireable fuse is that It can be rewired easily in case it is blown due to short circuit or over current which melts the fuse elements. Simple, put another wire of fuse elements with the same rating as before. As mentioned above, thermal fuse is a one time used only fuse. They are temperature sensitive fuse and the fuse element is made of temperature sensitive alloy. In a thermal fuse, the fuse element holds a mechanical spring contact which is normally closed. When high currents due to over current and short circuit flow through the elements of the fuse, the fuse elements melts down which lead to release the spring mechanism and prevent the arc and fire and protect the connected circuit. Related Articles:. Resettable fuse is a device, which can be used multiple times without replacing it. They open the circuit, when an over current event occurs and after some specific time they connect the circuit again. Polymeric positive temperature coefficient device PPTC, commonly known as a resettable fuse, poly-switch or poly-fuse is a passive electronic component used to protect against short current faults in electronic circuits. Application of resettable fuses is overcome where manually replacing fuses is difficult or almost impossible, e. Different types of Electrical and Electronic Fuses can be used in all types of electrical and electronic systems and applications including:. You may also read. It is very useful for me to rapidly and briefly briefly understand any topic on electrical field. To begin with it is a condensed informative article which I feel as very useful. However, I got a question. What will be the impact of selecting an AC fuse to keep it in the rotor circuit of a slip ring induction motor? Since the arcing time continues up to the current zero which matches with slip frequency I feel that the fuse body will be subjected to higher pressure due to thermal energy and has the probability of pressure rupture. Your email address will not be published. Table of Contents. Electrical Technology 10 9 minutes read. Show More. Related Articles. Emergency LED Lights. Leave a Reply Cancel reply Your email address will not be published. Check Also. Close Search for. Adblock Detected Our website is made possible by displaying online advertisements to our visitors. Please consider supporting us by disabling your ad blocker. We depends on ad revenue to keep creating quality content for you to learn and enjoy for free. Log in with Facebook or. Remember Me. You have no items in your shopping cart. Sorry, your search produced no results. Make sure all words are spelled correctly. Try different keywords Try more general keywords. Rear mounted F2 quick disconnect tabs. Read Full Description. Availability: In Stock. SKU: PanelAmp. GTIN: Read All Reviews 5 Add your review. Built-in internal shunt. Related Products. Quick View. Customers who purchased this item also purchased. Dimensional Drawing KB. Customer Reviews. Hard to read in daylight conditions By Guest. Almost impossible to read during daylight without covering with your hand to create a shadow. Otherwise, it functions fine. Was this review helpful? Our simple PWM solar charge controller has a max of 10 Amps on the load side of the controller and this is where we install the meter in a simple enclosure. It gives our customers the ability to see the battery voltage and keep track of how many Amps they are drawing through the protected load circuit. We have tested this meter for over 2 years and still performs as advertised. Limited for 12 volt power systems By Guest. I am setting up all my gear on 12v which will have a potential needed amperage of close to 30amps on full transmit! May have to return and hope

jazzmaster wiring harness
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chevy cruze 14 turbo timing chain

that Powerwerk will come up with a higher capacity meter! I do like the size and mounting system, great system otherwise. Good but note amp rating By Guest. Good product with easy wiring and no external shunt. I just wish the amp rating was higher. Also, the ammeter is not particularly accurate below 1A. But it is precise readings don't fluctuate , and it offers a lot of functionality in a small package. Great but limited. By Guest. This is a good switch for 50W radios but the 15A current limit is too low. Would like to see higher current options on this switch and current meters. Write a Customer Review Product review was submitted successfully, thanks! Write a review of this product and share your opinion with others. Review title. Overall Rating. It doesn't get any better. Your Review. The most useful comments contain specific examples about: How you use the product Things that are great about it Things that aren't so great about it. Newsletter Sign Up. Connect With Us. Yes Cancel.