How to wire a fuse box in a car

Part 1 of Buy a mountable backup camera for your specific vehicle. For safety, make sure you purchase a device specifically designed to be a rear-view camera. Purchasing one made for your specific vehicle will make it easier to install than a standard aftermarket camera. So you can install it easily, look for a camera that mounts onto or directly behind your license plate. Get an external monitor if you want to keep your existing rear-view mirror. An external backup monitor is a small video screen that mounts onto your windshield similarly to a GPS. Though they take up more space than internal monitors, external monitors are far easier to see and can be easily replaced if necessary. However, keep in mind that it may not have all the same features as devices designed for use with backup cameras. Purchase an internal monitor for a less obtrusive device. An internal backup monitor is a fully functioning rear-view mirror that houses a small screen inside the glass. Some internal monitors clip on top of your current rear-view mirror, but others replace your original mirror entirely. Some camera models use wireless transmitters instead of standard video cables. Part 2 of Take off your rear license plate. Using a Phillips head screwdriver, remove each of the screws holding your rear license plate in place. Then, pull the plate off and set it aside. Pop open your trunk and look for a solid interior panel covering the opposite side of your license plate mounting area. Then, insert a trim removal tool or other thin device behind the panel and pry it off. Drill a small hole in the license plate mounting area. Make sure there are no obstructions between the license plate mount and the rear wiring chamber. Then, create a small hole in the car using a power drill equipped with a high-speed twist drill bit. Then, note the spot where its splitting cord sits. If you come across any obstructions, try to remove them. Place a rubber grommet around your camera cable. Before running your camera cable into the car, slip a rubber grommet onto it near the non-splitting end. These small rubber washers, available at most home improvement stores, will keep the wire in place and prevent leaks. Run the camera cable into your trunk. Make sure you pull it tight so the rubber grommet lodges into the drilled hole. Your camera cable should run from the outside of the car to the inside of the car. Using a wire stripper or pliers, peel back the rubber covering the wires. Then, use a screwdriver or other thin tool to poke a hole through the middle of each exposed wire, separating the individual wire strands. Fuse your camera wires with the reverse light wires. Then, poke your bare wires through the center of the exposed reverse light wires and twist them together. For safety, make sure you wrap the combined wires in electrical tape. Part 3 of Then, run it through your vehicle to the area by the fuse box. Fix external monitors to the front windshield. Then, hook your monitor onto the mount. Most external monitors use a suction mount, though others may come with a more complex mounting system. Attach internal monitors to the rear-view mirror or mirror mount. Then, route the cable from the monitor to the area next to the fuse box. Then, run your cable through the exposed chamber. Then, wrap the connected cords with electrical tape to hold them together. You can find these at most electronic stores. Then, push the positive usually red end of the bare wire cable into the open end of a fuse tap. Finally, crimp the 2 cables together with a pair of pliers. You can find them at most auto part stores. Plug the fuse tap into the fuse box. Locate your fuse box and open it up. Then, plug your fuse tap into an open fuse cell. Part 4 of Connect your backup camera to its power and video cable. Close the trunk if necessary, then connect the backup camera to its power and video cable. Mount the camera to your license plate. Reattach your license plate and trim panels. Using a Phillips head screwdriver, put your rear license plate back on your vehicle. Test the camera to make sure everything works. Before using your new camera on public roads, test it in a safe area like your driveway. If it turns on, place a large, durable object like a trash can behind the camera to see how distorted the image is. If it does not turn on, read your installation manual for troubleshooting information. In many cases, rear-view camera malfunctions are caused by loose or improperly connected wires. You may want to ensure all cables and connections are secured tightly. Double check that all connections are correct. If this doesn't work, check to see if the camera chosen is in good

shape and isn't physically damaged. Not Helpful 1 Helpful 0. Suzuki installed reverse parking camera in my Swift Dzire Zxi, But the camera shows upper view and not the ground below. What can I do? Make sure that the camera is installed the correct way not upside down , and check the position of the camera mounted. Take it back to the dealer that installed it and ask them to check the alignment and fit. Include your email address to get a message when this question is answered. Though most car dealers and mechanics will not install aftermarket backup camera systems, many audio and electronic shops will. Helpful 3 Not Helpful 0. Make sure you turn the car off before working with bare or stripped wires. If you need to touch exposed wires while the car is on, put on a pair of shock-resistant rubber gloves. Helpful 2 Not Helpful 1. Related wikiHows How to. How to. More References 6. About This Article. Co-authored by:. Co-authors: 6. Updated: March 29, Categories: Cars. 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. Bernard Levesque Dec 22, Related Articles How to. By signing up you are agreeing to receive emails according to our privacy policy. Follow Us. Get all the best how-tos! 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! In electronics and electrical engineering , a fuse is an electrical safety device that operates to provide overcurrent protection of an electrical circuit. Its essential component is a metal wire or strip that melts when too much current flows through it, thereby stopping or interrupting the current. It is a sacrificial device ; once a fuse has operated it is an open circuit, and must be replaced or rewired, depending on its type. Fuses have been used as essential safety devices from the early days of electrical engineering. Today there are thousands of different fuse designs which have specific current and voltage ratings, breaking capacity, and response times, depending on the application. The time and current operating characteristics of fuses are chosen to provide adequate protection without needless interruption. Wiring regulations usually define a maximum fuse current rating for particular circuits. Short circuits , overloading, mismatched loads, or device failure are the prime or some of the reasons for fuse operation. When a damaged live wire makes contact with a metal case that is connected to ground, a short circuit will form and the fuse will blow. A fuse is an automatic means of removing power from a faulty system; often abbreviated to ADS Automatic Disconnection of Supply. Circuit breakers can be used as an alternative to fuses, but have significantly different characteristics. Breguet recommended the use of reduced-section conductors to protect telegraph stations from lightning strikes ; by melting, the smaller wires would protect apparatus and wiring inside the building. A fuse was patented by Thomas Edison in as part of his electric distribution system. A fuse consists of a metal strip or wire fuse element, of small cross-section compared to the circuit conductors, mounted between a pair of electrical terminals, and usually enclosed by a non-combustible housing. The fuse is arranged in series to carry all the current passing through the protected circuit. The resistance of the element generates heat due to the current flow. The size and construction of the element is empirically determined so that the heat produced for a normal current does not cause the element to attain a high temperature. If too high a current flows, the element rises to a higher temperature and either directly melts, or else melts a soldered joint within the fuse, opening the circuit. The fuse element is made of zinc, copper, silver, aluminum, [citation needed] or alloys among these or other various metals to provide stable and predictable characteristics. The element must not be damaged by minor harmless surges of current, and must not oxidize or change its behavior after possibly years of service. The fuse elements may be shaped to increase heating effect. In large fuses, current may be divided between multiple strips of metal. A dual-element fuse may contain a metal strip that melts instantly on a short circuit, and also contain a low-melting solder joint that responds to long-term overload of low values compared to a short circuit. Fuse elements may be supported by steel or nichrome wires, so that no strain is placed on the element, but a spring may be included to increase the speed of parting of the element fragments. The fuse element may be surrounded by air, or by materials intended to speed the quenching of the arc. Silica sand or non-conducting liquids may be used. The speed at which a fuse blows depends on how much current flows through it and the material of which the fuse is made. Manufacturers can provide a plot of current vs time, often plotted on logarithmic scales, to characterize the device and to allow comparison with the characteristics of protective devices upstream and downstream of the fuse. The operating time is not a fixed interval but decreases as the current increases. Fuses are designed to have particular characteristics of operating time compared to current. A standard fuse may require twice its rated current to open in one second, a fast-blow fuse may require twice its rated current to blow in 0. Fuse selection depends on the load's characteristics. Semiconductor devices may use a fast or ultrafast fuse as semiconductor devices heat rapidly when excess current flows. The fastest blowing fuses are designed for the

most sensitive electrical equipment, where even a short exposure to an overload current could be damaging. Normal fast-blow fuses are the most general purpose fuses. A time-delay fuse also known as an anti-surge or slow-blow fuse is designed to allow a current which is above the rated value of the fuse to flow for a short period of time without the fuse blowing. These types of fuse are used on equipment such as motors, which can draw larger than normal currents for up to several seconds while coming up to speed. The I 2 t rating is related to the amount of energy let through by the fuse element when it clears the electrical fault. This term is normally used in short circuit conditions and the values are used to perform co-ordination studies in electrical networks. I 2 t parameters are provided by charts in manufacturer data sheets for each fuse family. For coordination of fuse operation with upstream or downstream devices, both melting I 2 t and clearing I 2 t are specified. The melting I 2 t is proportional to the amount of energy required to begin melting the fuse element. The clearing I 2 t is proportional to the total energy let through by the fuse when clearing a fault. The energy is mainly dependent on current and time for fuses as well as the available fault level and system voltage. Since the I 2 t rating of the fuse is proportional to the energy it lets through, it is a measure of the thermal damage from the heat and magnetic forces that will be produced by a fault and. The breaking capacity is the maximum current that can safely be interrupted by the fuse. This should be higher than the prospective short-circuit current. Miniature fuses may have an interrupting rating only 10 times their rated current. Fuses for small, low-voltage , usually residential, wiring systems are commonly rated, in North American practice, to interrupt 10, amperes. Fuses for commercial or industrial power systems must have higher interrupting ratings, with some low-voltage current-limiting high interrupting fuses rated for , amperes. Fuses for high-voltage equipment, up to , volts, are rated by the total apparent power megavolt-amperes, MVA of the fault level on the circuit. Some fuses are designated high rupture capacity HRC or high breaking capacity HBC [6] and are usually filled with sand or a similar material. Low-voltage high rupture capacity HRC fuses are used in the area of main distribution boards in low-voltage networks where there is a high prospective short circuit current. They are generally larger than screw-type fuses, and have ferrule cap or blade contacts. High rupture capacity fuses may be rated to interrupt current of kA. HRC fuses are widely used in industrial installations and are also used in the public power grid, e. In some countries, because of the high fault current available where these fuses are used, local regulations may permit only trained personnel to change these fuses. Some varieties of HRC fuse include special handling features. The voltage rating of the fuse must be equal to or, greater than, what would become the open-circuit voltage. Plasma inside the glass tube may continue to conduct current until the current diminishes to the point where the plasma becomes a non-conducting gas. Rated voltage should be higher than the maximum voltage source it would have to disconnect. Connecting fuses in series does not increase the rated voltage of the combination, nor of any one fuse. Medium-voltage fuses rated for a few thousand volts are never used on low voltage circuits, because of their cost and because they cannot properly clear the circuit when operating at very low voltages. The manufacturer may specify the voltage drop across the fuse at rated current. There is a direct relationship between a fuse's cold resistance and its voltage drop value. The voltage drop should be taken into account, particularly when using a fuse in low-voltage applications. Voltage drop often is not significant in more traditional wire type fuses, but can be significant in other technologies such as resettable PPTC type fuses. Ambient temperature will change a fuse's operational parameters. Operating values will vary with each fuse family and are provided in manufacturer data sheets. Most fuses are marked on the body or end caps with markings that indicate their ratings. Surface-mount technology "chip type" fuses feature few or no markings, making identification very difficult. Similar appearing fuses may have significantly different properties, identified by their markings. Fuse markings [9] will generally convey the following information, either explicitly as text, or else implicit with the approval agency marking for a particular type:. Fuses come in a vast array of sizes and styles to serve in many applications, manufactured in standardised package layouts to make them easily interchangeable. Fuse bodies may be made of ceramic , glass , plastic , fiberglass , molded mica laminates, or molded compressed fibre depending on application and voltage class. Cartridge ferrule fuses have a cylindrical body terminated with metal end caps. Some cartridge fuses are manufactured with end caps of different sizes to prevent accidental insertion of the wrong fuse rating in a holder, giving them a bottle shape. Fuses for low voltage power circuits may have bolted blade or tag terminals which are secured by screws to a fuseholder. Some blade-type terminals are held by spring clips. Blade type fuses often require the use of a special purpose extractor tool to remove them from the fuse holder. Renewable fuses have replaceable fuse elements, allowing the fuse body and terminals to be reused if not damaged after a fuse operation. Fuses designed for soldering to a printed circuit board have radial or axial wire leads. Surface mount fuses have solder pads

instead of leads. High-voltage fuses of the expulsion type have fiber or glass-reinforced plastic tubes and an open end, and can have the fuse element replaced. Semi-enclosed fuses are fuse wire carriers in which the fusible wire itself can be replaced. The exact fusing current is not as well controlled as an enclosed fuse, and it is extremely important to use the correct diameter and material when replacing the fuse wire, and for these reasons these fuses are slowly falling from favour. These are still used in consumer units in some parts of the world, but are becoming less common. While glass fuses have the advantage of a fuse element visible for inspection purposes, they have a low breaking capacity interrupting rating , which generally restricts them to applications of 15 A or less at V AC. Ceramic fuses have the advantage of a higher breaking capacity, facilitating their use in circuits with higher current and voltage. Filling a fuse body with sand provides additional cooling of the arc and increases the breaking capacity of the fuse. Medium-voltage fuses may have liquid-filled envelopes to assist in the extinguishing of the arc. Some types of distribution switchgear use fuse links immersed in the oil that fills the equipment. Fuse packages may include a rejection feature such as a pin, slot, or tab, which prevents interchange of otherwise similar appearing fuses. For example, fuse holders for North American class RK fuses have a pin that prevents installation of similar-appearing class H fuses, which have a much lower breaking capacity and a solid blade terminal that lacks the slot of the RK type. Fuses can be built with different sized enclosures to prevent interchange of different ratings of fuse. For example, bottle style fuses distinguish between ratings with different cap diameters. Automotive glass fuses were made in different lengths, to prevent high-rated fuses being installed in a circuit intended for a lower rating. Glass cartridge and plug fuses allow direct inspection of the fusible element. Other fuses have other indication methods including:. Some fuses allow a special purpose micro switch or relay unit to be fixed to the fuse body. When the fuse element blows, the indicating pin extends to activate the micro switch or relay, which, in turn, triggers an event. Some fuses for medium-voltage applications use two or three separate barrels and two or three fuse elements in parallel. The International Electrotechnical Commission publishes standard for low-voltage power fuses. The standard is in four volumes, which describe general requirements, fuses for industrial and commercial applications, fuses for residential applications, and fuses to protect semiconductor devices. The IEC standard unifies several national standards, thereby improving the interchangeability of fuses in international trade. All fuses of different technologies tested to meet IEC standards will have similar time-current characteristics, which simplifies design and maintenance. Additional standard ampere ratings for fuses are 1, 3, 6, 10, and UL currently has 19 "parts". UL sets the general requirements for fuses, while the latter parts are dedicated to specific fuses sizes ex: for Class J, for Class L , or for categories of fuses with unique properties ex: for semiconductor fuses, for photovoltaic fuses. The general requirements apply except as modified by the supplemental part x. For example, UL allows photovoltaic fuses to be rated up to volts, DC, versus volts under the general requirements. IEC and UL nomenclature varies slightly. IEC standards refer to a "fuse" as the assembly of a fusible link and a fuse holder. In North American standards, the fuse is the replaceable portion of the assembly, and a fuse link would be a bare metal element for installation in a fuse. Automotive fuses are used to protect the wiring and electrical equipment for vehicles. There are several different types of automotive fuses and their usage is dependent upon the specific application, voltage, and current demands of the electrical circuit. Automotive fuses can be mounted in fuse blocks, inline fuse holders, or fuse clips. Some automotive fuses are occasionally used in non-automotive electrical applications. Most automotive fuses rated at 32 volts are used on circuits rated 24 volts DC and below. Fuses are used on power systems up to , volts AC. High-voltage fuses are used to protect instrument transformers used for electricity metering, or for small power transformers where the expense of a circuit breaker is not warranted. A circuit breaker at kV may cost up to five times as much as a set of power fuses, so the resulting saving can be tens of thousands of dollars. In medium-voltage distribution systems, a power fuse may be used to protect a transformer serving 1â€"3 houses. Pole-mounted distribution transformers are nearly always protected by a fusible cutout , which can have the fuse element replaced using live-line maintenance tools. Medium-voltage fuses are also used to protect motors, capacitor banks and transformers and may be mounted in metal enclosed switchgear, or rarely in new designs on open switchboards. Large power fuses use fusible elements made of silver , copper or tin to provide stable and predictable performance. High voltage expulsion fuses surround the fusible link with gas-evolving substances, such as boric acid. When the fuse blows, heat from the arc causes the boric acid to evolve large volumes of gases. The associated high pressure often greater than atmospheres and cooling gases rapidly quench the resulting arc. The hot gases are then explosively expelled out of the end s of the fuse. Such fuses can only be used outdoors. These type of fuses may have an impact pin to operate a switch

mechanism, so that all three phases are interrupted if any one fuse blows. High-power fuse means that these fuses can interrupt several kiloamperes. Fuses have the advantages of often being less costly and simpler than a circuit breaker for similar ratings. The blown fuse must be replaced with a new device which is less convenient than simply resetting a breaker and therefore likely to discourage people from ignoring faults. On the other hand, replacing a fuse without isolating the circuit first most building wiring designs do not provide individual isolation switches for each fuse can be dangerous in itself, particularly if the fault is a short circuit. Special current-limiting fuses are applied ahead of some molded-case breakers to protect the breakers in low-voltage power circuits with high short-circuit levels. Current-limiting fuses operate so quickly that they limit the total "let-through" energy that passes into the circuit, helping to protect downstream equipment from damage. These fuses open in less than one cycle of the AC power frequency; circuit breakers cannot match this speed. Some types of circuit breakers must be maintained on a regular basis to ensure their mechanical operation during an interruption. This is not the case with fuses, which rely on melting processes where no mechanical operation is required for the fuse to operate under fault conditions. In a multi-phase power circuit, if only one fuse opens, the remaining phases will have higher than normal currents, and unbalanced voltages, with possible damage to motors. Fuses only sense overcurrent, or to a degree, over-temperature, and cannot usually be used independently with protective relaying to provide more advanced protective functions, for example, ground fault detection. Some manufacturers of medium-voltage distribution fuses combine the overcurrent protection characteristics of the fusible element with the flexibility of relay protection by adding a pyrotechnic device to the fuse operated by external protective relays. For domestic applications, Miniature circuit breakers MCB are widely used as an alternative to fuses. Their rated current depend on the load current of the equipment to be protected and the ambient operational temperature. In the UK, older electrical consumer units also called fuse boxes are fitted either with semi-enclosed rewirable fuses BS or cartridge fuses BS Modern consumer units usually contain miniature circuit breakers MCBs instead of fuses, though cartridge fuses are sometimes still used, as in some applications MCBs are prone to nuisance tripping. Renewable fuses rewirable or cartridge allow user replacement, but this can be hazardous as it is easy to put a higher-rated or double fuse element link or wire into the holder overfusing , or simply fitting it with copper wire or even a totally different type of conducting object coins, hairpins, paper clips, nails, etc. One form of fuse box abuse was to put a penny in the socket, which defeated overcurrent protection and resulted in a dangerous condition. Such tampering will not be visible without full inspection of the fuse. Fuse wire was never used in North America for this reason, although renewable fuses continue to be made for distribution boards. The Wylex standard consumer unit was very popular in the United Kingdom until the wiring regulations started demanding residual-current devices RCDs for sockets that could feasibly supply equipment outside the equipotential zone. Some Wylex standard models were made with an RCD instead of the main switch, but for consumer units supplying the entire installation this is no longer compliant with the wiring regulations as alarm systems should not be RCD-protected. There are two styles of fuse base that can be screwed into these units: one designed for rewirable fusewire carriers and one designed for cartridge fuse carriers. Over the years MCBs have been made for both styles of base. In both cases, higher rated carriers had wider pins, so a carrier couldn't be changed for a higher rated one without also changing the base. Cartridge fuse carriers are also now available for DIN-rail enclosures. In North America, fuses were used in buildings wired before These Edison base fuses would screw into a fuse socket similar to Edison-base incandescent lamps. Ratings were 5, 10, 15, 20, 25, and 30 amperes. To prevent installation of fuses with an excessive current rating, later fuse boxes included rejection features in the fuse-holder socket, commonly known as Rejection Base Type S fuses which have smaller diameters that vary depending on the rating of the fuse. This means that fuses can only be replaced by the preset Type S fuse rating. Existing Edison fuse boards can easily be converted to only accept Rejection Base Type S fuses, by screwing-in a tamper-proof adapter. This adapter screws into the existing Edison fuse holder, and has a smaller diameter threaded hole to accept the designated Type S rated fuse. Some companies manufacture resettable miniature thermal circuit breakers , which screw into a fuse socket. However, any such breaker sold today does have one flaw. It may be installed in a circuit-breaker box with a door. If so, if the door is closed, the door may hold down the breaker's reset button. While in this state, the breaker is effectively useless: it does not provide any overcurrent protection. In the s, fuses in new residential or industrial construction for branch circuit protection were superseded by low voltage circuit breakers. Fuses are widely used for protection of electric motor circuits; for small overloads, the motor protection circuit will open the controlling contactor automatically, and the fuse will only operate for short circuits

or extreme overload. Where several fuses are connected in series at the various levels of a power distribution system, it is desirable to blow clear only the fuse or other overcurrent device electrically closest to the fault. This process is called "coordination" or "discrimination" and may require the time-current characteristics of two fuses to be plotted on a common current basis. Fuses are selected so that the minor, branch, fuse disconnects its circuit well before the supplying, major, fuse starts to melt. In this way, only the faulty circuit is interrupted with minimal disturbance to other circuits fed by a common supplying fuse. Where the fuses in a system are of similar types, simple rule-of-thumb ratios between ratings of the fuse closest to the load and the next fuse towards the source can be used. So-called self-resetting fuses use a thermoplastic conductive element known as a polymeric positive temperature coefficient PPTC thermistor that impedes the circuit during an overcurrent condition by increasing device resistance. The PPTC thermistor is self-resetting in that when current is removed, the device will cool and revert to low resistance. A thermal fuse is often found in consumer equipment such as coffee makers , hair dryers or transformers powering small consumer electronics devices. They contain a fusible, temperature-sensitive composition which holds a spring contact mechanism normally closed. When the surrounding temperature gets too high, the composition melts and allows the spring contact mechanism to break the circuit. The device can be used to prevent a fire in a hair dryer for example, by cutting off the power supply to the heater elements when the air flow is interrupted e. Thermal fuses are a 'one shot', non-resettable device which must be replaced once they have been activated blown. A cable limiter is similar to a fuse but is intended only for protection of low voltage power cables. It is used, for example, in networks where multiple cables may be used in parallel. It is not intended to provide overload protection, but instead protects a cable that is exposed to a short circuit. The characteristics of the limiter are matched to the size of cable so that the limiter clears a fault before the cable insulation is damaged. From Wikipedia, the free encyclopedia. Electrical safety device that provides overcurrent protection. For other uses, see Fuse disambiguation. A miniature time-delay V fuse that will interrupt a 0. Main article: Breaking capacity. Main article: IEC Main article: Fuse automotive. Main article: Resettable fuse. Main article: Thermal cutoff. Electronics portal. Patent Office number "Fuse Block". Cooper Bussmann. Retrieved Wright, P. Newber Jan 1, Electric Fuses, 3rd Edition. Fink, H. Hager Group. Archived from the original on Connecticut Electric, Inc. Archived from the original PDF on Mike Holt Enterprises, Inc, Richard C. Dorf ed. Electronic components. Potentiometer digital Variable capacitor Varicap. Capacitor types Ceramic resonator Crystal oscillator Inductor Parametron Relay reed relay mercury relay. Categories : Electric power systems components Electrical components Electrical wiring Safety equipment Fuses 19th-century inventions. Hidden categories: Articles with short description Short description is different from Wikidata All articles with unsourced statements Articles with unsourced statements from February Wikipedia articles needing clarification from July Articles with unsourced statements from February Commons category link is on Wikidata Wikipedia articles with GND identifiers Wikipedia articles with NDL identifiers. Namespaces Article Talk. Views Read Edit View history. Help Learn to edit Community portal Recent changes Upload file. Download as PDF Printable version. Wikimedia Commons. North American practice United Kingdom practice. AC power plugs and sockets Cable tray Electrical conduit Mineral-insulated copper-clad cable Multiway switching Steel wire armoured cable Ring main unit Ring circuit Thermoplastic-sheathed cable. Electronic symbols for a fuse. Wikimedia Commons has media related to Electrical fuses. A fuse is a low-resistance resistor device that protects a circuit from becoming overloaded. It is a short piece of wire that is designed to melt and break apart when exposed to an excess of electrical current. A fuse is connected in series to the circuit it protects. A blown fuse usually causes an electrical short or an overloaded circuit. The most common fuse to burn out in a car is the 12v power outlet, also known as the cigarette lighter. This is often caused by leaving a cell phone charger in it for a long time, or because of the occasional stray penny that falls into an exposed power outlet. A fuse box is located in the car and houses the fuses. Some cars have multiple fuse boxes with many different fuses. If something electrical in your vehicle suddenly stops working, start by checking the fuse box and get a certified mechanic to take a look and diagnose any electrical problems. Most cars have more than one fuse box - some vehicles may even have three or four. Car manufacturers tend to install fuse boxes in different locations depending on the make of the car. It is best to refer to your owner's manual to locate the fuse box you need, and also to determine which fuse controls each circuit. Step 1: Remove the fuse. With the car completely off, locate the fuse in question and remove it by grabbing it firmly with the fuse puller stored in the fuse box, or with a pair of needle nose pliers. Step 2: Inspect the fuse. Hold the fuse up to the light and check the metal wire for signs of damage or a break. If you see either of these, you will have to replace the fuse. If you do not have a fuse diagram to locate a specific fuse, you can test each fuse individually

with a test light. Step 2: Inspect the fuse with the test light. Attach the clip for the test light to any bare metal, and use the probe of the test light to touch each end of a fuse. If the fuse is good, the test light will light up on both sides of the fuse. If the fuse is bad, only one side will illuminate the test light. Once the damaged fuse is detected, be sure to replace it with a fuse of the same type and amp rating. Identifying and replacing a damaged fuse on your own can save you time and money. However, if the same fuse is blowing repeatedly or if certain electrical components are not working, it is advisable to enlist a certified mechanic to inspect the electrical system to identify the reason the fuse keeps blowing and replace the fuse box or fuse for you. The most popular service booked by readers of this article is Electric Problems Inspection. Our certified mobile mechanics perform over services, including diagnostics, brakes, oil changes, scheduled mileage maintenances, and will come to you with all necessary parts and tools. Our certified mobile mechanics make house calls in over 2, U. Fast, free online quotes for your car repair. Electric Problems Inspection Cost. Service Location. Part 1 of 4: Locate the fuse box Materials required Flashlight Needle nose pliers or fuse puller Test light Most cars have more than one fuse box - some vehicles may even have three or four. Part 2 of 4: Visually inspect fuses Most fuse boxes will have a diagram displaying the name and location of each fuse. Part 3 of 4: Use a test light If you do not have a fuse diagram to locate a specific fuse, you can test each fuse individually with a test light. Tip : Use a computer-safe test light, preferably one with an LED light, as probing unknown fuses with an older style test light may draw excessive current. If you test a fuse for the airbag, it may deploy - so be careful! Part 4 of 4: Replacing the fuse Once the damaged fuse is detected, be sure to replace it with a fuse of the same type and amp rating. Tip : Fuses are sold at any auto parts or hardware store or dealership. Home Articles. The statements expressed above are only for informational purposes and should be independently verified. Please see our terms of service for more details. Excellent Auto Repair Ratings. YourMechanic Auto Repair. Related Articles. What Causes a Car to Stall? Recent Electric Problems Inspection reviews. Excellent Rating. Rating Summary. Nicholas 11 years of experience. Request Nicholas. Super convenient. Mechanic showed up right on time. Fortunately, our issue was easily resolved with minimal hassle. Awesome mechanic. Honest and kept me in the loop. Highly recommend this company and Nicholas. Johnny was on time, honest, professional and very informative. Best experience that I've had in regards to mechanical work. Johnny was great he saved my family money very nice very respectful one of the best mechanic I have ever met and seen I will pick him for all future needs. Andrian 32 years of experience. Request Andrian. Andrian was an excellent mechanic. He explained the problem to me in detail which was extremely helpful and he resolved the problem with professionalism and great attention to detail. I will definitely call to book another appointment with him if my Mercedes has any more issues in the future. I highly recommend him. This guy is the real deal nit just as a mechanic but as a genuine human being. He goes above and beyond to ensure that you understand what's happening with your vehicle. Robert 20 years of experience. Request Robert. Did all that he could do for the service that I recommend, I figured it would be something that I would have to have checked out at the dealership but he eliminated a couple of possibilities for me. Need Help With Your Car? Related articles. The highest tech cars can contain miles of electrical wiring. Wires must be secured and protected from heat and debris in order to work properly. Read more. You trust your car. You may not think about it, but you believe that certain functions will occur without fail. You may be aware Have Have you ever wondered how a mechanic checks your alternator? Do you have ANY aftermarket electrical equipment in the car? Such components can impact the function of the PCM. Also, check the alternator output and stability. If the power supply to the PCM is not within specification, that could damage Car lights come on brakes are stiff not sure electrical on military base but it won't start. If the lights were on and burning up fuses even up to 30 amps, then there is a major short in the vehicle's wiring system. Check to see what the lights were tied into when the aftermarket lights were installed People often only think a battery will get damaged in the winter. The summer heat is when most of the Browse other content. Schedule your Electric Problems Inspection today! Electric Problems Inspection Price. How can we help? Read FAQ. Your question might be answered by sellers, manufacturers, or customers who bought this product. Please make sure that you are posting in the form of a question. Please enter a question. Smartphones, tablets and other accessories can charge much faster, and you can save time, And they adapt for normal charging speed. Since the iPhone series does not support fast charging, charging the iPhone is normal speed. For mobile phones that support fast charging, you must use the original charging cable or fast charging cable to achieve fast charging. The advanced full aluminum alloy body with scratch resistance technology keeps it sturdy and let the 12v USB outlet always look like new. Upgrade metal car charger will not be overheating at high temperatures, which is safer than plastic one. Convenient to check the USB

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It also analyzes reviews to verify trustworthiness. Customer images. See all customer images. Top reviews Most recent Top reviews. Top reviews from the United States. There was a problem filtering reviews right now. Please try again later. Color: Blue Verified Purchase. My cigarette lighter charger always vibrated loose and I was constantly having to ensure it was pushed in. This item was a breeze to install and works perfectly. I replaced the lighter outlet in my Jeep Wrangler. I had to open the hole in the plastic panel just a tiny bit to allow for it to insert. Easy work for a dremel tool. Made connections to the existing lighter wiring and I was in business. It comes with spade connectors and everything you need. I soldered the wiring instead of using the connectors but even with that, installation took MAYBE 15 minutes! Images in this review. This was purchased for portable and emergency fast charging for cell phones – e. I replaced the ring lugs with Johnson power pole 30A connectors for easy hookup to amateur radio power supplies in bench and portable environments. The unit has an LED display of input voltage from the power source. This provides good information about how your power source is doing against the charging load. I notice fluctuation in voltage, likely in response to the quick charging regime. The charging voltage thus provides an indication of the state of charge if you know what to look for in your equipment. Most simple power supplies do not have voltmeters built in, so this unit adds that feature. The design is practical and rugged and while I got it for the portable and emergency use cases, this may find it's way into every day use on the workbench. I added this charge station to my truck dash. The fit and finish is very nice. I like seeing the battery voltage reading. It is easy to instal with a step drill. By F Crosby on December 23, Color: Deep Blue Verified Purchase. I used to this on the cigarette lighter port on my 06 STI. I had to grind the port out a little bit since this is slightly bigger than a normal cigarette lighter but I was able to make it fit in the same location and the door still closes is over it. Installation was a breeze as I was able to push the pins out of the factory harness and slide them directly onto the prongs of this even as locking features I'm surprised at how accurate the voltmeter seems to be normally around Great quality! Color: Red Verified Purchase. I don't know why I didn't do this sooner. Better than OEM. Fit pushed right in on my Honda and was very snug. Didn't bother with the lock ring even. Update: the voltmeter does read significantly LOW. My OBD2 and handheld multimeter shows about 0. So don't rely only on the display. Charging works great still. By jeremy on May 22, Great product. Easy to install and use. I would like to have had it in anodized blue but its a nice addition to my center console. I will buy this again with my other center console build. I really like this charging port. I bought it to replace one of the 3 accessory ports in a Westmarine accessory port cigarette lighter-type bank for my sailboat. The Westmarine ports seem to prefer to spit out the little USB adapters so it would be hit or miss whether my devices would charge. The USB connection is a tight fit and it comes with a spare fuse for the inline fuse holder that's provided. I'd buy it again. These fit right into replace a cigarette lighter hole, very convenient. Only thing I'd say is the blue I got is pretty bright. At night it reflects off my drivers side window, as I drilled a hole left of the steering wheel. It's nothing I cant fix with some tape, but just know if you're mounting near the side of your vehicle, you could see it reflect in your window at night. I would get the red LED next time, as that would be slightly dimmer. Overall I'd buy this again, I bought 3 and have used 2 so far. Very nice item. Oh and the best part! It's a pseudo gauge for

your batteries health! The display reads the voltage on your battery so you get an early warning if your battery is dying and you need a new one. Normal operating while car is on will be around So if you're driving and you start to see your voltage drop below See all reviews. Top reviews from other countries. Translate all reviews to English. Have ordered 2x double USB Charging with voltage indicator. Report abuse. Excelente calidad de material. Report abuse Translate review to English. Worked a treat in outback OZ! More to consider from our brands. Pages with related products. See and discover other items: car charger dual 3. There's a problem loading this menu right now. Learn more about Amazon Prime. Get free delivery with Amazon Prime. Back to top. Get to Know Us. Amazon Payment Products. English Choose a language for shopping. Amazon Music Stream millions of songs. Amazon Advertising Find, attract, and engage customers. Amazon Drive Cloud storage from Amazon. 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Customers who viewed this item also viewed. Page 1 of 1 Start over Page 1 of 1. Previous page. Next page. More items to explore. VanTop H 10" 2. Have a question? There was a problem completing your request. Please try your search again later. Garmin Parking Mode Cable, 6. Compare with similar items. Product information Product Dimensions 5. Would you like to tell us about a lower price? See questions and answers. Customer reviews. How are ratings calculated? Instead, our system considers things like how recent a review is and if the reviewer bought the item on Amazon. It also analyzes reviews to verify trustworthiness. Customer images. See all customer images. Top reviews Most recent Top reviews. Top reviews from the United States. There was a problem filtering reviews right now. Please try again later. Verified Purchase. You really need to watch YouTube for instructions, and you also need a multi tester. It's not easy as people said. Took me about half a day to install. And be very careful on the polarity in you fuse box. Use the multi meter to test which is in and out pin of the fuse box. Make sure, to screw the ground cable to the chassis of your car, or else it will not power up your dash cam. I love the end result, you just need to be patient and take your time installing it. My vehicle is Honda Odyssey. Update: Dec. Great product! By Louis on June 9, Images in this review. This is a problem if you have a device that has a memory card or can hook to a computer. For example, I used it for a dash cam. Every time my car starts with this hardwire kit, the cam asks "Enter mass storage mode? In fact, I bought this kit to replace an older hardwire kit that was of inferior quality, but was power-only, and had started the cam fine in record mode without the mass-storage screen popping up. If you are using this for a GPS, you may run into the same problem. It might work fine for radar detectors, etc. That aside, the kit is very high-quality, it has lots of options for difference fuse adapters, and is very easy to install. Installed this kit in my Ford F to power my Rexing V2 dash cam, and connected it to a fuse slot that powers up when the ignition turns on. It works great except when I put the truck in reverse. The dash cam powers off then on again intermittently. I suspect that the back-up camera, back-up lights etc. I wish there was a way to disable the cutoff mechanism when it is wired to a fuse slot that activates with the ignition. I have this connected in the fuse box of my truck that has constant power, which is what the manufacturer recommends in order to use the Parking Monitoring feature. Ever since installing this, my truck battery keeps draining to the point that I need to jump the truck just to start it! I even just purchased a brand new battery last week and went out to the truck tonight to find it completely

dead! The manufacturer says that this wiring harness has a built in feature that will turn your camera off if your battery drops below a certain percent so it won't drain your battery. Now I can save the cigarette lighter adapter cable that came with the dash cam for when I use the device in my secondary vehicle. Regardless, this is a good solution and I am sure will last me a long time. Bought this hardware kit to use with my Apeman C dash cam. Powers the cam on with ignition power and turns off when I turn my truck off. Comes with four different types of fuse pigtails so there is no problem having the one that fits your vehicle. Available line was long enough to run from passenger side kick panel, up the A pillar and across the top of my windshield to the camera located on drivers side next to the rear view mirror. Purchased this for my Nextbase dash cam so I could hard wire it in my new vehicle rather than running the 12v accessory cord all the way to the accessory outlet in the center console. The wire has the same 90 degree USB connector which I prefer since it routes the wire straight up to the headliner where it can be tucked away easily with the included plastic tool. The cable was thin enough to run down the A-pillar on the drivers side and then down to the fuse box under the dash. It came with the necessary fuse taps, although the instructions do not make it clear which slot is for the original fuse and which is for the USB power. With some trial and error, I was able to sort this out and finish the install with some cable ties. Not included, but would be nice. Works perfectly and had plenty of spare cable remaining if I had a larger vehicle. Much much better price for this than the Nextbase branded hardwire kit, but still works the same. By Jason on January 3, See all reviews. Top reviews from other countries. Product itself is fine and a everything is included in the package. The only warning is that the hardwiring a dash cam is not for everyone. For those who are planing to do this by themselves, before deciding to purchase any hardwire kit, make sure your fuse box inside the car is easily accessible! If not, consider visiting a mechanic to help you with this. I spent a few days on my Corolla and online assistance to complete this task. One person found this helpful. This is the kit you need to buy if you're looking to hardwire your dashcam. I initially purchased another hardwire kit atato and it not fit in into my fuse box, unfortunately. After looking around Amazon, I came across this product and I'm glad I did. It comes with everything you need and a selection of various fuse types and the matching fuse tap cables to go with it. Installation was very straight forward, however, make sure you get a circuit tester or a multimeter to ensure which terminal is positive and negative in the fuse slot you are tapping into. If you install the fuse tap in the incorrect orientation you can blow a fuse so double check your work. There are many youtube videos that will you give you step by step instruction on how to properly select fuses whether you're looking for constant or acc power installation. In addition, these videos will show how to check which fuse is positive and negative. Before you start working in your fuse box, be sure to properly read your car's manual and see which fuse you can safely tap into, do not tap into any fuse that are critical components of the car such airbags, abs, and any fuses that are related to the engine. You want to find a fuse that is labeled as an accessory or nonessiential. I installed this fuse tap into my cigarette lighter fuse and it worked beautifully. The power cable on the hardwire kit is long enough so you can tuck it under the panels of your car to have proper cable management and a clean looking install. I'm very happy with this product and would highly recommend this kit to anyone looking to hardwire your dashcam in your car. My car ran out of battery but we wasn't sure if it was the dash cam draining it or something else since we didn't drive it for over a week. Customer support was extremely nice to send us another unit to replace and test if it was the unit or not. Installation is not going to be easy for someone without electrical knowledge, you'd want to google installation videos for ways to ensure polarity is correct when installing otherwise your circuit won't be protected by the fuse. Works perfectly! My car looks so much better now without all the wires and now I've freed up a 12V outlet. My dash cam now turns on and starts recording automatically when I turn the car on and turns off when I turn my car off. Looked at some instructions for installation online. It was simple to install in theory but actually took me about half the day on my own to make sure it was done properly. It was not difficult overall, just more time-consuming than I initially thought it would be so make sure to set enough time aside. Report abuse. Review looked good so I bought it, but the product was defective out of the box. There is no return policy on this item, so I can't even replace it or get a refund. Featured items you may like. Pages with related products. See and discover other items: Best mini dash cameras for cars , c

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