48a electrical wire size

48a electrical wire size

You can run 48A on a 60A breaker or 60A on an 80A breaker (there are no 75A breakers that I know of). If he is installing #6 Romex or UF, it can only support 44A continuous, so although I had electricians tell me it"s perfectly safe at 48A, you still need to set your charger to 40A and put it on a 50A breaker if you want it to meet code.

Wire size is easy to figure out from an ampacity chart. For individual wires in conduit use the 75 C columns. Check your charger specs as to whether you can use aluminum or have to use copper. That"s the easy part. But you MUST do a Load Calculation. Typical service is 200A.

Others have asked similar question, but I wanted to put in my setup and get any advice/critiques. Adding two ChargePoint chargers to my garage. New car charges at 11Kw onboard charge (with 240v, that"s 45.8A), so I"d like to set the charge points to max 48A to take advantage of this although not needed for my other car at this time. Chargers are continuous pull, that means 1.25x 48A = 60A rated circuit.

Going to do two separate runs from the circuit panel. First is 45 feet and second is 75 feet. Going to use the following for each charger:2 hots- 6 AWG THHN/THWN-2 copper 19 strand cerrowire1 ground - 8 AWG THHN/THWN-2 copper 19 strand cerrowire

I"d really like to advise you to please watch Technology Connections" superb video on home EV charging, and the section at 28:15 seems written for you. I hear this kind of "huge charging" plan from EV novices a lot, and obviously, so does Alec.

It seems like either you believe EVs can only charge at one specific speed (if the above didn"t put that right, see Alec"s other video on how EV charging works), or you"re a "Fastest Charge Possible" type personality. It"s nice for travel, where you need 0-100% overnight, but it doesn"t make any practical sense for real world EV charging at home.

You can really do one circuit and use Power Sharing with equipped EVSEs (not the ChargePoint; honestly we"re not big fans of it since it provides so few options for provisioning power to the EV). A single 48A circuit is going to be plennnnty for 3 cars with Power Sharing, given that it"s unlikely all 3 are going to need 150 miles of recharge in the same night.

That"s not how that works. They"re giving you the sales number, or a presumption that the voltage is 230V. Actually, the EV spec does not specify volts or watts, but rather amps. In the US or Canada, you"ll have honest 240V, so 11.56 kW nominal.

The charge rate, in amps, is decided by the EVSE not the EV. I guarantee you they did not program the car to

artificially limit the charge rate to 45.8 amps. It supports up to a given ampacity, but that will be a "round by EV standards" number such as 24, 32, 40 or 48 amps.