

Is 48v dc dangerous

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1.5 V can indeed be quite shocking with enough current (fell for one of those "Do you want some gum?" tricks back in high school...), but they sometimes do not use 1.5 V with the low amperage levels, some use a DC motor to vibrate and complete the trick.

So I guess there's two parameters here, voltage and current... but are there rough numbers on how much of each (or in combination, which I guess would be power) would be considered hazardous?

No old telephone lines have always been 48vDC well at least since from 1950s, if your skin is wet you can feel it slightly, like on your forearm. Now the ring voltage is 90-110vAC with a 2 on 4 sec off cycle (USA). It will ring your bell but good, should you be touching the wires when someone calls. The ring voltage rides on top of the 48vDC, so its present on the same two conductors that the voice voltage(DC) is on. Luckily it's 4 seconds off will give you a chance to get off the conductors with a scream (of pain).

How much voltage is dangerous is not really a static number as it depends on your body resistance, time of exposure and source "stiffness" (i.e. how much current it can supply). You get figures like 60V (or as low as 30V) which are an attempt at an average figure above which "caution should be taken". However, depending on how "conductive" you are at any one time, sometimes e.g. 50V might be quite safe and other times it may kill you. DC or AC (and what frequency) seem to make a difference too, female or male, etc - this table is very instructive:

Figures as low as 20mA across the heart are given as possibly capable of inducing fibrillation - here is another table from the same source that gives body resistance based on different situations:

Here is the reference the tables came from, I think it is quite accurate based on some experiments I have done myself measuring body resistances. The rest of the site seems to be generally very well informed and presented from the bits I have read, so I think this may be quite a trustworthy source.

I add to this answer ongoingly, either as new information comes to my attention, or when the subject is raised elsewhere on SEEE, or when "pushback" occurs to what seems to be to be a very well established and very important fact. That is

12 VDC applied across the chest has killed volunteers despite medical experts standing by !!!(From memory - volunteer prisoners participating in medical research).

Carry a car battery with exposed terminals on a hot day when you are sweating and press the terminals to your body (as could happen worst case when lifting the battery, etc.), and you may end up repeating the experiment.

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The references, especially A review of hazards associated with exposure to low voltages make it very clear that a number of reputable peer reviewed sources substantiate this fact.

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Web: <https://www.hollanddutchtours.nl/contact-us/>

Email: energystorage2000@gmail.com

WhatsApp: 8613816583346

