

**RCD's offer very good protection against Earth Fault Currents, the main areas of application are as follows:**

**Protection against indirect contact or where the Zs value is too high.** In Places where overload protection cannot react within the specified timescale due to the earth loop impedance being too high, adding an RCD may solve the problem without having to make any other changes to the system. The high sensitivity of the RCD will ensure disconnection within the specified time and thus without detriment to the overload discrimination (MCB/RCD systems only). In particular situations such as bathrooms and building sites, use of an RCD will help achieve the more stringent tripping times required by regulation. At all times to avoid the danger of exposed conductive parts reaching unacceptably high voltage, the rated residual operating current multiplied by the Zs value must not exceed 50V.

**Protection against Direct Contact.** In this case RCD's offer a high level of protection but must **not** be the only method of protection. To offer this degree of protection, the RCD must have a sensitivity of 30mA or less and must trip-out with a residual current of 150mA in less than 40mS.

**Protection against shock outside the equipotential bonding zone.** Earth bonding is used in an installation to try

and ensure that, as near as possible, all metallic parts are maintained to the same potential as earth. Working with portable equipment outside the equipotential bonding zone introduces additional shock hazards. Any 32A or lower socket outlet that may reasonably be expected to supply portable equipment should be protected by a 30mA RCD, unless using reduced voltage supplied via an isolating transformer.

**Protection for portable equipment.** The provisions of the wiring Regulations demand the use of RCD protection to protect the users of any such equipment with the exception of where a socket is specifically designed to be used outside of equipotential bonding zone. The use of RCD's to control such portable equipment is widely recognised as having greatly increased safety in the home and the workplace.

**Protection in Special Locations.** The use of RCD's is either obligatory or strongly recommended in the following locations:

Caravans, Shed's, Garages or Port-a-cabins. Near Swimming pools, Construction Sites, TT wiring systems and on Farms. - at each location a 30mA RCD should be used.

**For more information on RCD's or any other query with installing or purchasing the right Protek equipment, please call our helpline on: 01543 46 75 75**