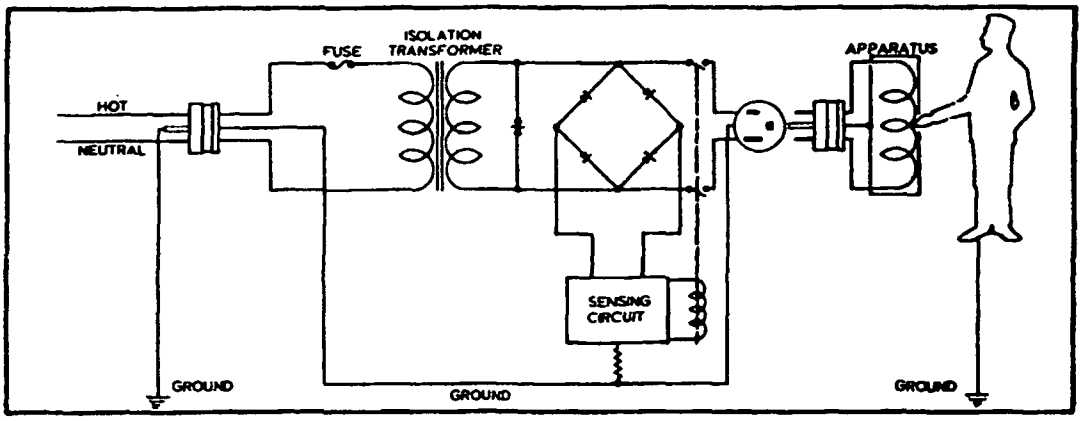


FIG 33-3 — Isolation-type ground fault interrupter An isolating transformer provides an inductive coupling between load and line, both hot and neutral wires connect to the isolating transformer There is no continuous wire between

should be placed in a special room or be made inaccessible to other than authorized personnel by screen enclosures Doors to the enclosure should be kept locked

Good illumination should be provided for the front and rear of switchboards and maintained ready for use at all times An emergency source of illumination should also be provided

Switch and fuse cabinets should have close-fitting doors, and the doors should be kept locked To warn employees that electrical parts are exposed and to remind them to close all doors of equipment, the inside of the doors may be painted orange

The switchboard framework and metal parts of guards should be grounded in accordance with code regulations

Connections, wiring, and equipment of switchboards and panel boards should be arranged in an orderly manner Switches, fuses, and automatic circuit breakers should be plainly marked and arranged to afford ready identification of circuits or equipment supplied through them

It is good practice to keep a diagram of switchboard connections and devices posted near the equipment

Protection against accidental shock from live electrical parts, such as switchboards, fuse panels, and control equipment, can be minimized by insulating the floor area within range of the live parts For low-voltage exposures, special insulating mats or dry wood floors with no metal parts are used These insulating mats should be made of material having proper moisture resistance and nonconductive properties, and should withstand mechanical abuses which may be encountered in such service See American Standard J6 series, "Specifications for Rubber Protective Equipment for Electrical Workers "

Circuits initiated by pushbuttons should be low voltage However, pushbutton controls may be used for a high-voltage circuit if step-down transformers are provided to prevent the voltage in the control part of the circuit from exceeding 250 volts

Motors

For maximum safety each motor should be of the type and size required for the load and for the conditions under which it must operate Excessive overloading for long periods, use of nonapproved motors in areas containing flammable vapors or dusts, and defective wiring are typical of the unsafe practices that should be avoided

The following are common motor problems in industry dust, stray oil, moisture, misalignment, vibration, overload, and friction

- In plant operations, dust is constantly settling on motors, housings, windings, slip rings, and commutators, and trying to work its way to the bearings The problem of dust