



IC4484 AUTOMATIC DUAL-VOLTAGE ADAPTER

Before any adjustments, servicing, parts replacement or any other act is performed requiring physical contact with the electrical working components or wiring of this equipment, DISCONNECT THE BATTERY AND DISCHARGE CAPACITOR IC.

FUNCTION

The function of the Automatic Dual-voltage Adapter is to permit a particular electric vehicle to be operated from different battery voltages. With this adapter the control components, such as the contactor coils, hourmeter, horn, etc. can be operated from different voltages without damage to the components. Adapters are available for dual 24/36-volt operation or 36/48-volt operation. The adapter can be utilized with SCR or magnetic controls.

NOTE: Contactor types and ratings should be reviewed prior to installation of this adapter.

OPERATION

The control card senses the applied battery voltage and instructs the control relay to insert dropping resistors. The resistors are inserted in series with the contactor coils and other vehicle components that can not withstand the higher voltage. The control relay has six normally open contacts available, three of which are generally used with the F, R, By Pass and Pump Contactors. This feature only protects the components as described above. Consideration must be given to the traction and pump motors to ensure their compatibility on dual-voltages.

For proper application of this adapter to SCR control, the current limit on the SCR control should be set to its recommended value, with the control energized at the lower of the two voltages. If current limit is adjusted with the control energized at the higher of the two voltages, the maximum allowable current may be exceeded when operating at the lower voltage.

TESTING

When the lower of the dual-voltages is applied to card terminals 1 (+) to 3 (-) the VR relay should

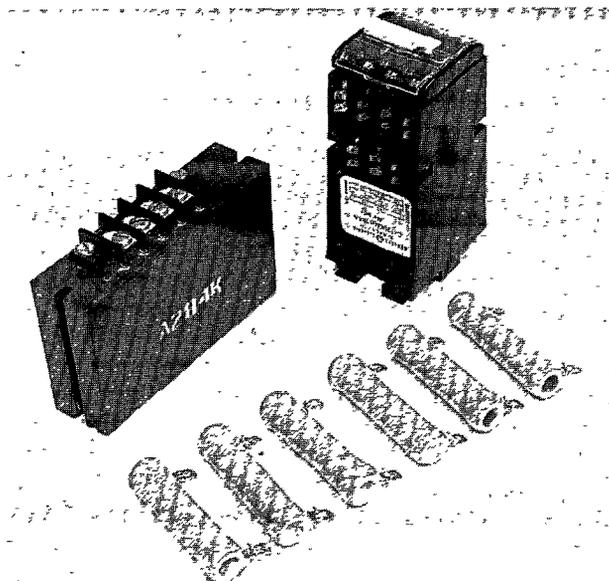


Fig. 1. Voltage adapter kit

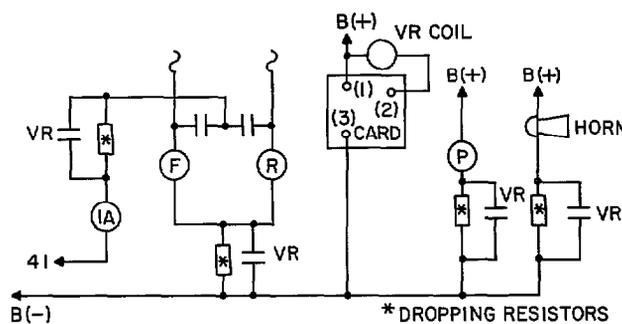


Fig. 2. Typical circuit for dual-voltage adapter

pick up. When the higher of the voltages is applied to the same card terminals, the relay should not pick up.

Should the adapter misoperate, first check for missing or loose connection. Next test the relay by applying the lower of the dual-voltages to the relay coil terminals. If the relay operates, change the sensing card. In the event that a component will not operate at the higher voltage, check for an open circuit through the dropping resistor.

The information contained herein is intended to assist truck users and dealers in the servicing of control furnished by the General Electric Company. It does not purport to cover all details or variations in equipment or provide for every possible contingency to be met in connection with installation, operation or maintenance.

Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the truck manufacturer through his normal service channels, not directly to General Electric Company.