ABB Power T&D Company Inc.
Relay Division
Coral Springs, FL
Allentown, PA

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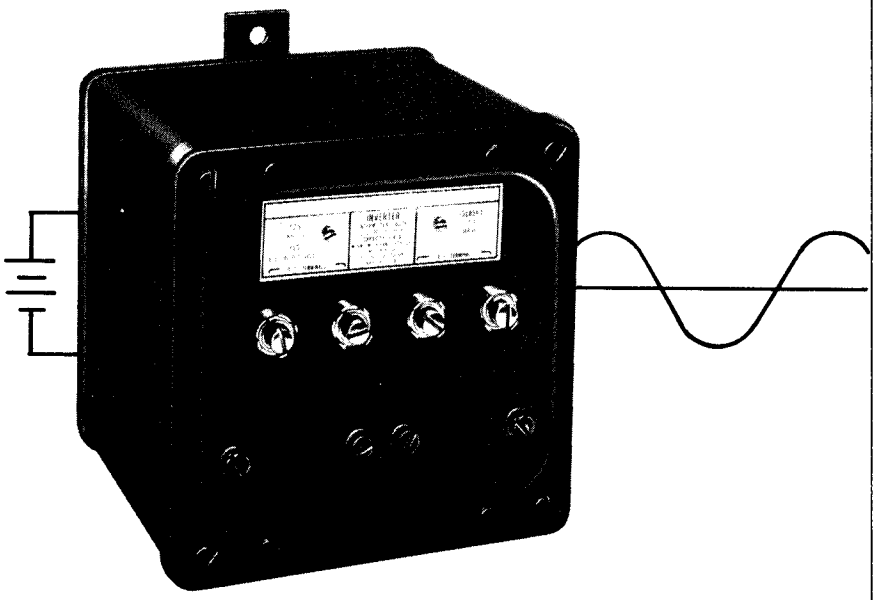
Converts 125-250 Volts Dc Supply to
115 Volts Ac, 60 Hertz
For Operation of Relay and Timing Motors

Device Number: 9

Dc to Ac Inverter



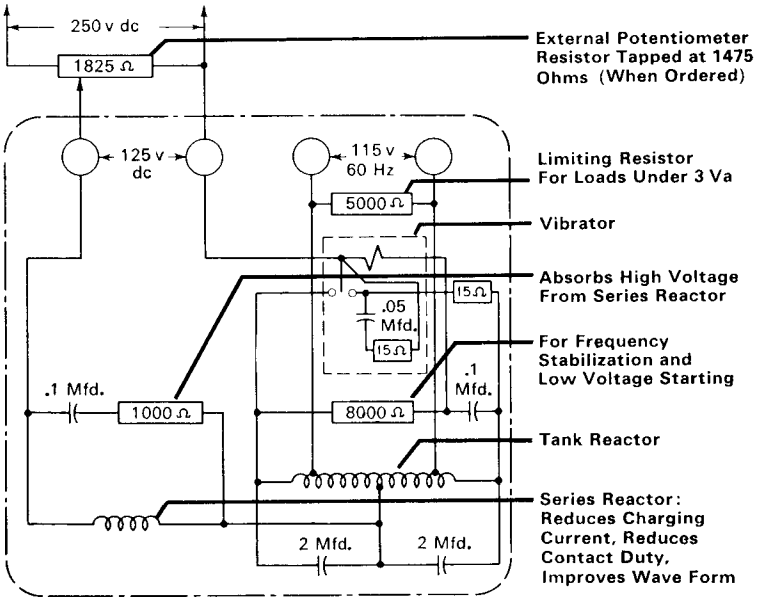


Fig. 1

Application

Designed for intermittent use wherever a reliable source of ac power is required to operate relay timing motors (one or two motors may be operated intermittently).

Output wave form closely approximates a sine curve over an output range of 0 to 8 volt-amperes, 60 Hertz. Where less than 3 volt-amperes are required, the inverter can be supplied with a self-contained load limiting resistor for maximum stabilization at low outputs. The resistor can be disconnected for 3 to 8 volt-amperes output.

Although rated 125 volts dc, the inverter will start at 70 percent of rated input voltage. For operation from 250 volts dc supply, an external potentiometer resistor is required.

Operation (See Figure 1)

The inverter includes a magnetically operated double contact vibrator which charges a tank circuit through a series reactor. An excellent output wave form is maintained by the reactor which reduces the instantaneous charging current.

If the voltage of the dc supply is greater than the 125-volt dc rating of the inverter, a series resistor should **not** be used to reduce the voltage applied to the input terminals of the inverter. Such resistor application would produce a rapidly fluctuating voltage at the inverter terminals, because of the intermittent current flow; and the output of the inverter would vary considerably from the output obtained with a constant dc input voltage.

The frequency of the output voltage will not vary more than two hertz above or one hertz below 60 hertz, from no load to maximum load.

Advantages

Near-perfect wave form

Frequency stability over entire range

Low starting voltage

Burden Data

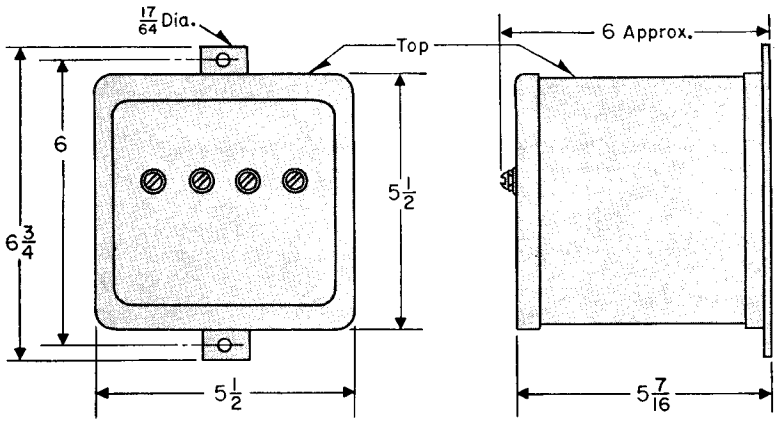
(For 7.5 Volt-Amperes Ac Burden)

Dc Station Voltage	Drain From Battery
125	25 watts
250	80 watts①

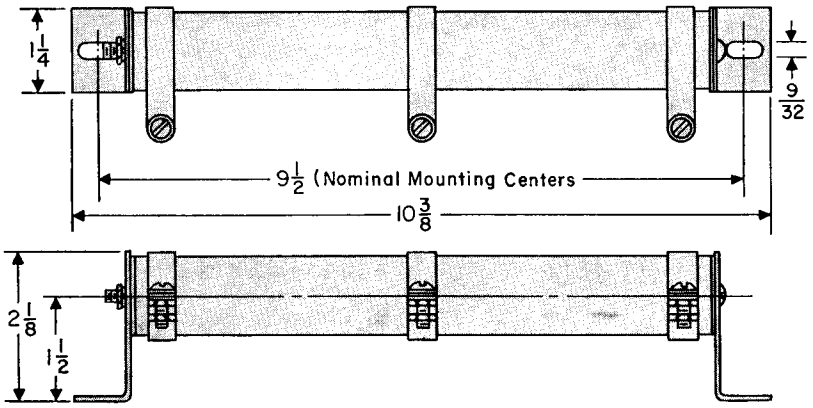
① Including external potentiometer resistor.

Dimensions (In Inches) For Reference Only

Inverter ②



Potentiometer Resistor (Style Number 07B4865G17)



② Inverter must be mounted vertically as shown to insure correct operation.

Selector Guide

For Converting 125 Volts Dc to 115 Volts Ac, 60 Hertz③

Output Volt-Amperes Ac	Load Limiting Resistor Required	Typical Application		Dc to Ac Inverter Style Number
		Relay Type	Motor Burden	
0-3	Yes	TK	2.5 va	1008 561
		TD	3.0 va	.....
		SGR-12	2.4 va	.....
0-8	No	RC (or any two of above)	8 va	1008 549

③ For 250 volt dc application, order additional potentiometer resistor (style number 07B4865G17). 24 or 48 volt inverters not available.

Weights: Net, 12 pounds; shipping, 15 pounds.
Domestic Shipping Carton Dimensions: 10" x 10" x 18".

Further Information

List Prices: PL 41-020
Technical Data: TD 41-025
Instructions: IL 41-856
Other Protective Relays:
Application Selector Guide, TD 41-016

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