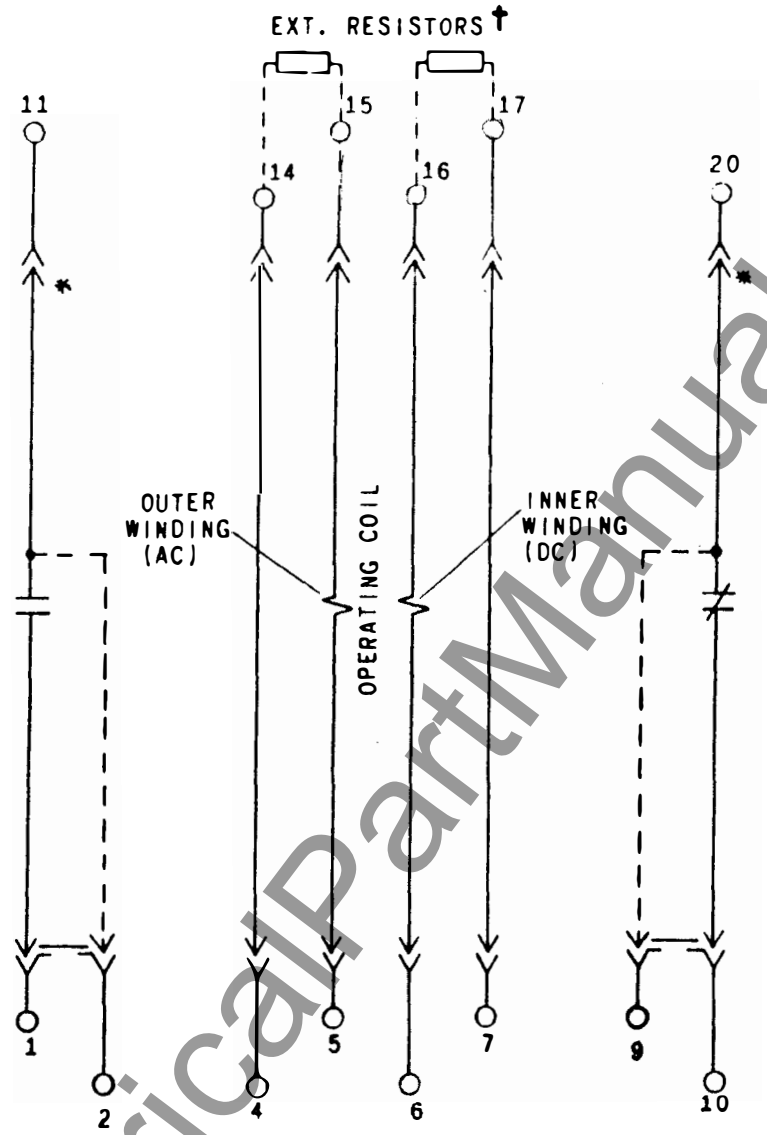
INSTRUCTIONS

GEI-44201B
Insert Booklet- GEI-28802

INSTANTANEOUS VOLTAGE RELAY

TYPE PJV17B

GENERAL ELECTRIC



† SEE SHEET 2 FOR RESISTOR VALUES.

Fig. 1 (402A918)

MODEL NUMBER	DC CIRCUIT		AC CIRCUIT	
	VOLTS CONTINOUS	RESISTOR OHMS STUDS 16-17	VOLTS CONTINOUS	RESISTOR OHMS STUDS 14-15
12PJV17B1A	48	150	115	300
12PJV17B2A	125	510	115	300
12PJV17B3A	24	36	230	1200
12PJV17B4A	250	1200	230	1200
12PJV17B5A	24	36	115	300
12PJV17B6A	125	510	230	1200
12PJV17B7A	250	1200	115	300

* Figure 1 (402A918 SH.1[1], SH.2[2]) Internal Connections for PJV17B Relay

* Indicates Revision

INSTANTANEOUS VOLTAGE RELAY TYPE PJV17B

INTRODUCTION

The Type PJV17B relay is a plunger type instantaneous voltage relay with high drop-out voltage. This relay is similar in construction and operating principle to the PJV relay described in the included instructions GEI-28802. The combination of this supplement and the attached instruction book form instructions for the Type PJV17B relay.

APPLICATION

The Type PJV17B relay is designed for d-c applications where an instantaneous voltage relay with a high drop-out characteristic is required.

CONSTRUCTION

This relay is provided with a two-winding coil, one winding for connection across the d-c supply to be protected or controlled and the other for connection across a constant a-c voltage. Both of the windings must be connected in series with the external resistors as described under CONNECTIONS. The armature has limited travel. The relay has no target.

The high drop-out feature results from the dual excitation and the limited armature travel. The a-c excitation introduces a fluctuation into the normally steady d-c armature force. The fluctuation tends to eliminate the effect of friction which is responsible for the lower dropout inherent in a d-c plunger type relay.

RATINGS

Types PJV17B relay is available for all standard d-c ratings with the outer windings for either 115 or 230 volts, 50 or 60 cycles. The limited armature travel results in small contact gaps and lower contact interruption rating. The contacts will make and carry continuously 5 amperes or 30 amperes for tripping duty. The interruption rating of the contacts is 50 percent of the current values given in Interruption Table of attached instruction book.

BURDENS

The volt-ampere burden of the a-c winding circuit including the resistor is approximately 40 volt-amperes.

INSTALLATION

MOUNTING

The outline and panel drilling for the Type PJV17B relay is shown in Fig. 4 of the attached instructions.

CONNECTIONS

The internal connection diagram for the Type PJV17B relay is shown in Fig. 1 of this supplement. When coil connections are made, it should be noted that both inner and outer windings should be connected in series with external resistors. A two-tube cage-type resistor is furnished for this purpose with each resistor marked with terminal numbers with which each resistor is to be connected.

The relay is also provided with shorting bars on the contacts, arranged so that the use of them is optional. The contacts may be shorted out if desired when the plug is removed.

ADJUSTMENTS

Normal contact adjustments are made to give 1/32 inch gap on the normally open contacts when the relay is de-energized. If normally closed contacts are present they should have approximately 1/64 inch wipe when the relay is de-energized. The contact back stop should be adjusted to provide 1/64 inch wipe on the normally open contacts when the relay is picked up; or if there are no normally open contacts the armature travel should be limited to 1/32 inch including the wipe on the normally closed contacts.

Fixed contact arms in the normally closed position should be adjusted to have the maximum initial tension which will permit the plunger rod to strike the molded base with the relay de-energized. Fixed contact brushes in the normally open position should be adjusted to have 15 grams initial tension. Initial tension is defined as the force required to push the contact arm away from the brass stop as measured at the contact tip.

The relay has been adjusted at the factory to operate at the d-c voltage specified on the requisition for the relay with the a-c circuit energized. If no d-c operating voltage is specified the relay is set at the nominal value specified on the model list. The d-c drop-out voltage when the a-c winding is energized is in excess of 95 percent of the pick-up voltage.

These instructions do not purport to cover all details or variations in equipment nor to 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 General Electric Company.

To the extent required the products described herein meet applicable ANSI, IEEE and NEMA standards; but no such assurance is given with respect to local codes and ordinances because they vary greatly.