

INTEGRATORS IN2/501 SERIES

Introduction

The IN2/501 releases a relay if the input is made open-circuit for several seconds or if the input is made open-circuit intermittently for shorter periods. The relay operates a few seconds after the input is connected to earth potential. The IN2/501 is used in Automatic Monitors.

The IN2/501 is constructed on a CH1/12A chassis with index peg positions 16 and 26.

Circuit Description

The circuit of the IN2/501 is given in Fig. 1. Under normal conditions the input on pin 12 is connected to earth (relay RLA operated). If the input is made open-circuit, +12 volts is applied to diode D1. Capacitor C2 receives an initial charge via capacitor C1 to produce a 1-volt step at the base of transistor TR1 which is the first stage of a

three-stage emitter follower.

Capacitor C2 continues to charge via resistor R4. As the voltage at the base of TR1 reaches +4.5 volts a Schmitt trigger circuit, which includes transistors TR4 and TR5, releases relay RLA. An intermittent input causes a series of 1-volt steps to be applied to C2 thus ensuring that the relay releases if the input circuit is intermittent.

If the input is earthed capacitor C2 discharges through resistor R3 and relay RLA operates.

A periodic input of earth potential on pin 13 removes the collector supply from transistors TR1 to TR3 and capacitor C2 discharges through the base-emitter diode junctions of these transistors.

Test Procedure

The IN2/501 is tested as part of an Automatic Monitor.

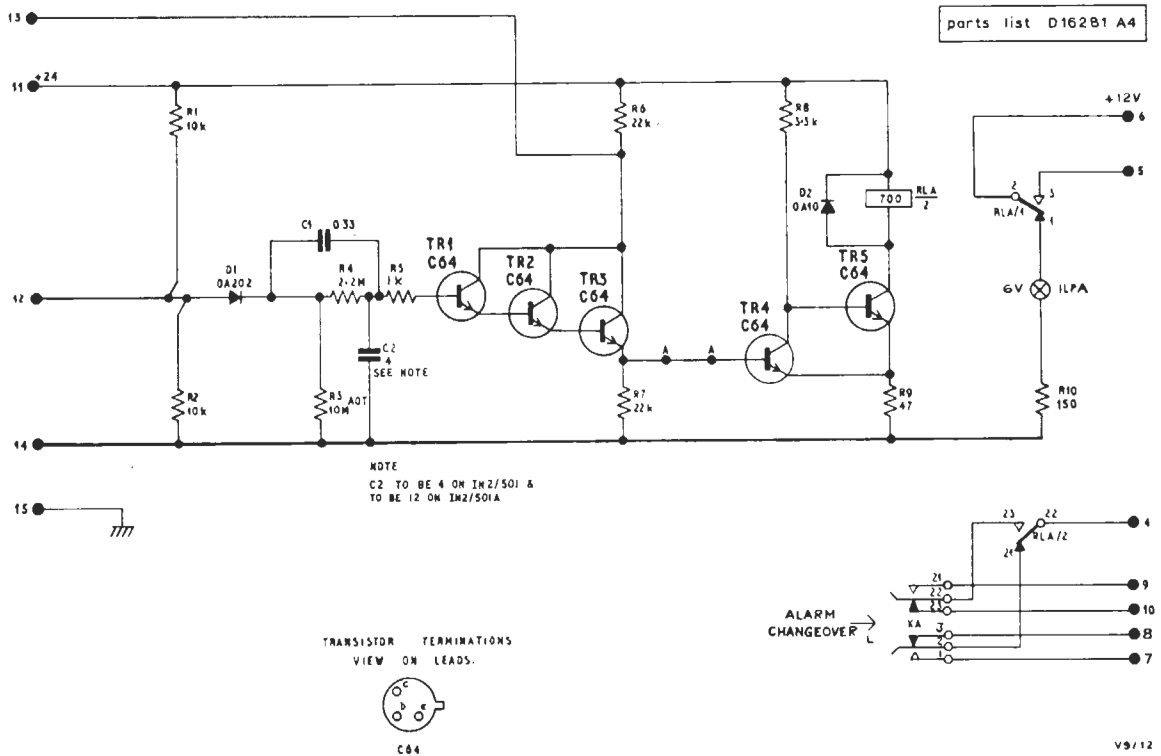


Fig. 1 Circuit of the IN2/501