

Order Number

Serial Number

## PRODUCT/TEST MANUAL

**1L70K1**

## RECEIVE RELAY & POWER SUPPLY

<b>Issue Level</b>	<b>Date</b>	<b>Summary of changes</b>
A	08/06/1999	Initial issue.
B	15/11/2000	Revised 6 c) voltage level (Was <30V DC).

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AF	MW	MW	

## 1. BROAD DESCRIPTION

When the line is to be powered at the receive end the 1L70 provides an economical single unit power supply & receive relay. It is particularly suitable for use with remote float switches where power may not be available at the remote transmitting end.

The 1L70 has an electromechanical relay with output contacts controlled by a contact closure at the remote end of a private line copper pair. The relay operating voltage is derived from the 240 volts AC mains supply via an approved isolating transformer that supplies approximately 21volts AC which is rectified, smoothed and fed out over the copper pair. The output relay is connected in series with this supply and will operate on closure of the external contact.

## 2. SPECIFICATIONS

Auxiliary Supply Voltage	240 Volt AC +/-10%
Auxiliary Supply Burden	Approx 1W with the output relay output relay operated
Ambient Temperature Range	0°C to 55°C

Output Relay Contact Ratings

### **Make and Carry Continuously**

3000 VA AC resistive with maximums of 660 Volt and 12 Amp  
3000 VA DC resistive with maximums of 660 Volt and 12 Amp

### **Make and Carry of 0.5 Second**

7500 VA AC resistive with maximums of 660 Volt and 30 Amp  
7500 VA DC resistive with maximums of 660 Volt and 30 amp

## 3. TEST EQUIPMENT REQUIRED

AC Auxiliary Supply  
High Voltage Test Equipment.

## 4. ASSOCIATED DRAWINGS

154 - 070-101                  Wiring Diagram

## 5. HIGH VOLTAGE TESTING

Apply 3.5KV RMS between the terminal groups as listed in A & B below for 1 minute.

**GROUP A**  
2,3,4,6,7  
2,3,4,14,15

**GROUP B**  
14,15  
6,7

## 6. CALIBRATION

- a) Monitor the relay output contacts on terminals 2, 3 & 4 and apply a short circuit across terminals 14 & 15. The output relay should operate and the normally open contact between 2 & 4 should close.

**6. CALIBRATION (cont)**

- b) Take the probe from terminal 2 and place it on terminal 3, remove the short on 14 & 15 the relay should release and continuity should be present between terminals 3 & 4.
- c) Apply 240 VAC and check voltage across terminals 14 & 15 is less than 40 volts DC.

Check

**7. GENERAL & FUNCTIONAL**

- a) Check that unit operates satisfactorily over the range of 216 to 264 volts auxiliary supply.
- b) Ensure contacts operate correctly
- c) Check that the relay is electrically sound and mechanically robust as per Standard Inspection & Test Schedule 903-000-026

PASS

TESTED BY : \_\_\_\_\_ DATE : \_\_\_\_\_

**8. CONNECTION DIAGRAM**

