

161-009-903
Issue A 20/1/95
Sheet 1 of 3



Order Number

Serial Number

2L9K3 TEST PROCEDURE

BATTERY EARTH FAULT RELAY

1. TEST EQUIPMENT REQUIRED

50 V DC Power Supply.
240 V DC Power Supply
Decade Box.

2. ASSOCIATED DRAWINGS

161-009-101	Connection Diagram
660-102-203	Circuit Diagram
660-102-603	Circuit Loading

3. HIGH VOLTAGE TESTING

- a) Apply 2KV RMS 50 Hz between all terminals and frame.
- b) Apply 3 5KV 1/50us pulses of each polarity between all terminals and frame.

4. CALIBRATION & TEST PROCEDURE

- a) Allow 5 minutes warm up time before calibration.
- b) Set the front panel switch to position 2 (positive earth test). Connect 240 V DC to terminals 10(+ve) and 8(-ve). Connect the decade resistance box between terminals 10 and 9. Adjust R15 until the voltage at pin 3 of IC-1 is the same when the decade box is connected between 10 and 9 or 8 and 9. (The switch must be on position 6 when the decade box is connected between terminals 8 and 9). The decade box should be set to 2K ohm for this adjustment.
- c) Set the front panel switch to position 2. Set the decade box (connected between terminals 10 and 9) to 1K. Set the front panel potentiometer to 1K. Adjust R12 until the relay picks up. Set the front panel potentiometer to 50 K and adjust R28 until the relay picks up at 50 k on the decade box. Repeat the calibration until the relay is within tolerance.

4. CALIBRATION & TEST PROCEDURE(cont)

d) Positive to Earth Test

SCALE	PICK-UP	PICK-UP	DROP-OUT
1K	0.5 - 1.5K		
2K	1.0 - 3.0K		
5K	4.0 - 6.0K		
10K	9.0 - 11K		
20K	18 - 22K		
30K	27 - 33K		
40K	36 - 44K		
50K	45 - 55K		

e) Negative to Earth Test

SCALE	PICK-UP	PICK-UP	DROP-OUT
1K	0.5 - 1.5K		
2K	1.0 - 3.0K		
5K	4.0 - 6.0K		
10K	9.0 - 11K		
20K	18 - 22K		
30K	27 - 33K		
40K	36 - 44K		
50K	45 - 55K		

f) Set the decade box to 1K ohm and adjust R8 until the front panel meter reads 1K (FSD). Check that the calibration other positions is within ± 10 %.

5. GENERAL & FUNCTIONAL

a) Check the operation of the relay contacts and that the LED becomes illuminated when the relay picks up.

b) Check all wiring and switch positions for correctness and check micro switch action and operation of CT (cam) for correctness



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5. GENERAL & FUNCTIONAL (cont)

c) Check the timer operation. Contact CT1 to change state every 15 minutes and Contact CT2 is to close onto R1 just prior to the opening of CT1 in either direction and remains closed for 20 seconds after which it will revert to its original position.

d) Check that the relay is electrically sound and mechanically robust as per Standard Inspection & Test Schedule 903-000-026

PASS

TESTED BY : _____ DATE : _____