

2V330 TEST PROCEDURE

VOLTAGE SENSING RELAY

1. TEST EQUIPMENT REQUIRED

AC & DC Voltage source. Digital Voltmeter.

2. ASSOCIATED DRAWINGS

688-018-201	Circuit Diagram 2V330
688-018-300	Loading Diagram 2V330
688-018-401	Parts List 2V330

3. HIGH VOLTAGE TESTING

1. Apply 1KV RMS 50Hz for 1 minute between Pins 1,3,4,5,6,8 joined and Pins 2 & 7 joined.
2. Apply 1KV RMS 50Hz for 1 minute between Pins 1,3,4 joined and Pins 5,6,8 joined.

4. CALIBRATION & TEST PROCEDURE

- 1 Connect DVM and 30V DC current limited power supply to unit: +Ve or Active to Pin 7 and -Ve to Pin 2.
- 2 Set Mode Switches to "DC", "NON LATCHING", "LOW RANGE" and "SLOW".
- 3 Set "PICK UP" pot on front of unit to minimum (20V) setting, and "DROPOUT" pot to 95%.
- 4 Set trimpot RV3 to maximum resistance (fully anticlockwise).
- 5 Apply 30V DC input, current limited to 50mA.
- 6 Check that output relay is picked up, and that supply current is less than 30mA; if greater, the switchmode relay driver stage is probably not oscillating correctly.
- 7 Check that the green "POWER" LED and the red "PU" LED are both on.
8. Reduce current limit on power supply from 50mA to approx 15mA so that output relay chatters.

- 9 Check that relay chatters at approx. 5Hz, and at approx. 20Hz when the "FAST/SLOW" switch is changed to the "FAST" position.



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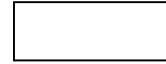
4. CALIBRATION & TEST PROCEDURE (Cont)

- 10 Connect DC 20V-150V variable voltage supply to unit in lieu of the 30V DC current limited supply.
- 11 Set PICKUP pot on the front of the unit to maximum setting.
- 12 Adjust trimpot RV3 so that output relay just picks up when the input voltage is increased above 100V (adjust initially to within +/-0.5V); tolerance +/- 2V.
- 13 Check that the dropout voltage at this setting is 95V +/- 3V.
- 14 Set DROPOUT pot to minimum setting (75%) and check that dropout voltage is between 65V and 80V.
- 15 Set PICKUP pot to minimum setting (20V), and check that pickup voltage is between 18 and 24V.
- 16 Connect AC 20V - 265V variable voltage supply to unit in lieu of the DC supply, and change DVM range to AC.
- 17 Change "AC/DC" switch to "AC", "HIGH/LOW" range switch to "HIGH", and PICKUP setting to maximum (260V).
- 18 Check that output relay just picks up when the input voltage is increased above 260V AC; tolerance +/- 6V. Repeat step 12 if the unit is outside this tolerance.
- 19 Change the "LATCHING/NON LATCHING" switch to "LATCHING" and check that the output relay stays energised once picked up.
- 20 Re-set to the "NON LATCHING" mode.
- 21 Check that the output relay contacts (2 C/O) are functioning correctly.
- 22 Affix " Tested" sticker to unit.
- 23 Pack unit in "Smart Series" box.

5. GENERAL & FUNCTIONAL

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

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5. GENERAL & FUNCTIONAL (Cont)

2 GENERAL DESCRIPTION

This unit is a fully self-contained relay powered from the AC or DC supply it is monitoring, and detects if the input voltage is above a predetermined level set by pot on the front of the unit. AC or DC operation is selected via a mode switch on the side of the unit, along with high or low voltage range, fast/slow operate time, and latching or non latching of the output relay when it picks up. A second front dial pot enables the user to set the desired amount of hysteresis (ie. drop out voltage) to avoid output relay chatter and/or suit the specific application.

3. OVERALL SPECIFICATION

Input Supply Voltage Range	20V to 265V AC or DC.
Power consumption	less than 4VA
Power supply status	Green LED indicates power available.
Relay Energisation Status	Red LED indicates PU.
Operating Temperature range	-5 to 55 deg C
Dielectric Strength	1KV RMS circuit to circuit
Output Relay (2C/O)	
Contact Rating	5A/240VAC Resistive 1800VA max. 5A/24VDC Resistive 200W max.
Mechanical life	20 x 10 ⁶ operations min.
Electrical life	1 x 10 ⁵ operations min.
Operate Time	100ms/500ms approx. (selectable)
Reset Time	500ms approx.

TESTED BY : _____ DATE : _____