

REV NO.	TITLE	CONT ON SHEET	2	SH NO. 1
244A8610	TEST INSTRUCTIONS Slip Guard Relay Module - With Meter			
CONT ON SHEET	FIRST MADE FOR	2		SH NO. 1

For ease of test, card extender may be used.
Allen wrench to position knobs is required.

1. Verify the following:
C50 is 100 volt, 360MFD capacitor
CR1 is securely fastened to heat sink
Mechanically zero power factor meter
Check with ohmmeter on RX10,000 that CR1 is isolated from heat sink.
2. Set Trip PF and time delay full CCW. Jumper S (TB1) to T (TB1). Connect input transformer for 115 volt connection and apply 115 volts 60CPS to H1, H4. Momentarily, jumper R (TB1) to D (TB1). Relay RR should pick up and stay up. Check with ohmmeter between X1 (TB2) and Z1 (TB2) that this is true.
3. Measure voltage from SPFA pin 26 to pin 22. It should be +27 volts $\pm 2V$ with less than .1V P.P. ripple. Power factor meter should read 1.0 power factor and voltage N (34) to COM (22) should be +5 volts DC. Adjust R65 on SPFA card if necessary to obtain unity power factor and 4.7 to 5.3 volts. Record this voltage as V_N . Connect jumper from R to D.
4. Slowly turn TPF CW until relay drops out. This should occur when (6) to COM (22) is $V_N \pm .1$ volt. Position TPF knob on shaft so that pointer is opposite 1.0 PF when (6) to COM (22) reads the trip voltage. To reset remove AC for 10 sec. Repeat step 4 to see that relay now trips when TPF knob points to 1.0 PF and power factor meter reads 1.0 PF. Verify that power supply is still +27 volts $\pm 2V$ with less than .1 volt PP ripple. Remove AC power. Remove R (TB2) to D (TB2) jumper.
5. Reapply AC power. Turn TPF full CCW and TD full CW. Push white button on RR and check that relay picks up and light lights. Wait 15 sec. then quickly snap TPF full CW and verify that RR drop out after roughly 1 sec. delay. Turn TD full CCW and repeat. Delay should now be almost instantaneous (.1 to .2 sec.) (times are not critical). Remove all power. Set TPF to max. CCW. Remove all jumpers.
6. Connect circuit per Fig. 1. Jumper R (TB1) to D (TB1). Reapply power.

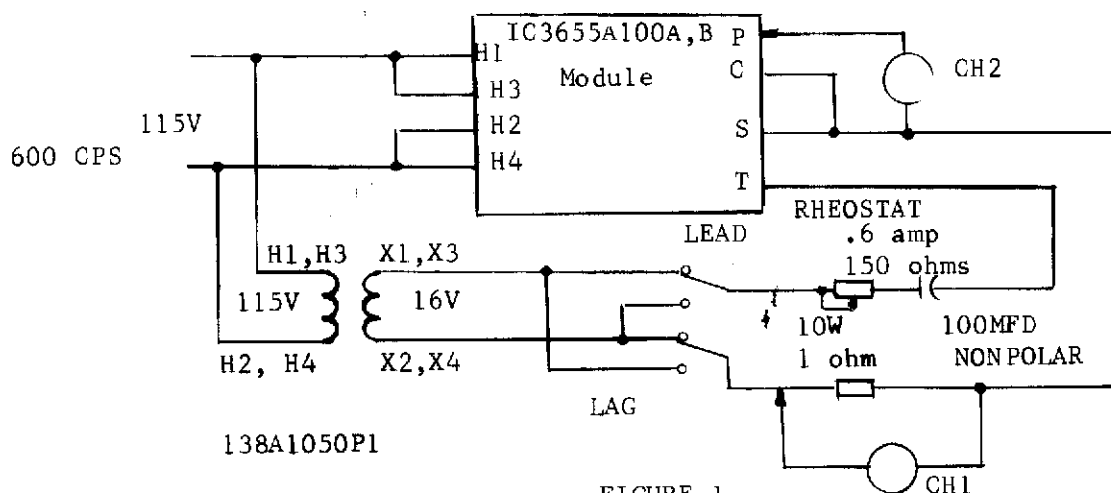


FIGURE 1

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Use variable time and amplitude on scope to make channel 2 cover 10 divisions and both channel 1 and channel 2 to have same zero level (DC) and same peak to peak amplitude. Vary rheostat to obtain figure 2. Channel 1 should cross zero 3 divisions before channel 2. Verify that power factor meter reads .8 leading power factor $\pm 5\%$.

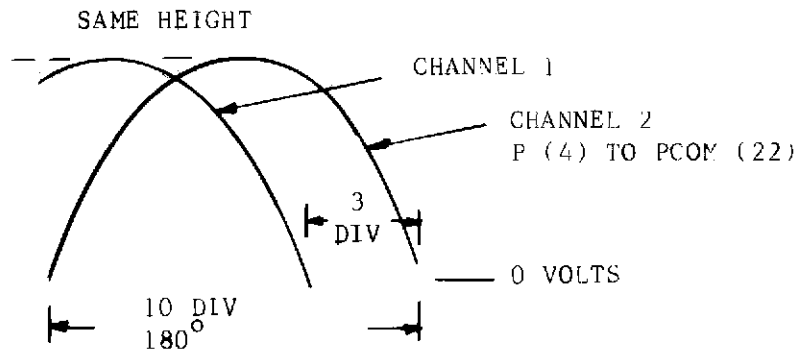


FIGURE 2

7. Switch to log position and obtain Figure 2 except channel 1 now reversed. Power factor meter should read .8 lagging $\pm 5\%$. Relay should be picked up. Slowly increase TPF CW and verify that relay drops when reach .8 $\pm 5\%$.
8. Set "TPF" to .8 lagging and "time delay" to .6 sec. and lock knobs with screwdriver. This completes test.

REVISIONS

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