TEST INSTRUCTIONS



Device Name Power Flow Detector
Device Number 0517L0228 G001

Date: April 4, 2006

Location: Book or file File

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1. PURPOSE:

a. Static and dynamic test procedures for Power Flow Detector 0517L0228 G001

2. ELEMENTARY:

a. Drawing 216B9786AE

3. EQUIPMENT:

- a. Variac
- b. 2 DVM
- c. Oscilloscope
- d. Anatek Dual Power Supply
- e. 100K resistor 177A1460 P320
- f. Jumper from 2TB1 to 2TB4
- g. 0.107 Ohm Cable in Dennis' Cabinet
- h. HP Precision Power Supply TL #00799
- i. Drawing 216B9786AE

4. SET UP:

a. Setup the Variac to 120Vac and connect it to 2TB9 and 2TB10.

b. Install (100K) into R20 saddle clamps.

but not turn or

c. Connect Anatek supply to 2TB5(+) and 2TB6(=). Use 2TB6 as the common Ground for the meters and Oscilloscope.

d. Connect 0.107 Ohm cable to Precision Power supply and the other end to 1TB2(+) and 1TB3(-)

5. PROCEDURE:

a. Turn on the 120Vac. Verify all 3 I'm OK lights turn on and K1 and K2 relays pick up. Check for +5Vdc at CP25. Check +15Vdc at CP20 and -15Vdc at CP24.

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b. Check for 275Hz ±10% at CP10. See Figure 1.

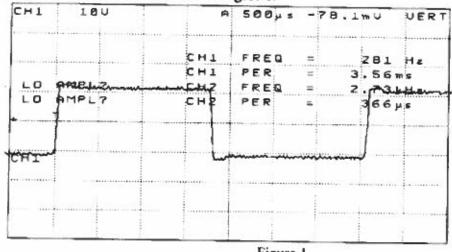


Figure 1

- c. Check 0Vdc at 2TB1. Adjust R5 to obtain this value. Adjust R4 for minimum AC ripple.
- d. Turn on the Precision Power supply to the jig. Slowly turn up the voltage unit 100mV at V1 is reached. Verify +5.00 Vdc at 2TB1. Adjust R6 to obtain this reading. Verify AC<DC level detector and trip lights are on and K1 relay drops out.
- e. Connect Scope Channel I to CP13 and Scope Channel 2 to CP12. Verify 500 usec negative pulse at CP13 when PB3 (RESET) is released. See Figure 2. Some supplies may not appear as figure ensure that Channel I does indeed go low for a period of time.

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ļ					828	. 00 µ	S	
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LO	RES?			CH1	PER			3 EDGE
	RES?			CHZ	FRE	:	1	4.5kHz
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СH	1					RE	=	REF

Figure 2

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f. Power down all the supplies. Check the following resistance for the relays.

K1	3TB7 - 3TB8 ∝Ω	3TB7 - 3TB9 OΩ
Ki	3TB12 - 3TB11 ∝Ω	$3TB12 - 3TB10 0\Omega$
K2	3TB1 - 3TB2 ∝Ω	3TB1 - 3TB3 0Ω
K2	3TB12-3TB11 ∝Ω	3TB12-3TB100Ω
	6 5	6 4

g. 13. Power up the AC supply. Check the following resistance for the relays.

K1	$3TB7 - 3TB8 0\Omega$	3TB7 - 3TB9 ∝Ω
K1	3TB12 - 3TB11 0Ω	3TB12 - 3TB10 ∝Ω
K2	3TB1 - 3TB2 0Ω	3TB1 - 3TB3 ∝Ω
K2	3TB12-3TB11'0Ω	3TB12-3TB10 ∝Ω
	6 5	6 4

- h. Turn on the precision supply. Ground 2TB7 momentarily and CSM Trip light comes on and the K2 relay drops out.
- Power down the DC supply and remove Jumper 2TB1 to 2TB4. Power up the DC supply. Connect 2TB4 to COM and check for 0V at CP2. Adjust R2 to obtain this reading.
- Reconnect 2TB1 to 2TB4. With precision power supply off. Increase the voltage at 2TB5 and 2TB6 to +7.5 Vdc and verify -5.0Vdc at CP14.
- k. With no DC input to either the isolator or the ACCT input, verify 2TB2 is 0Vdc. Adjust R3 to obtain this.
- 1. Input 100mV to the isolator and +7.5 V to the ACCT inputs. Verify +5Vdc at CP2 and -5Vdc at CP14. While monitoring the Level Detector leds, adjust R1 so both the leds are off. Press the reset button to clear any faults.
- m. Once the unit displays no faults. Vary the Isolator input and / or the ACCT input to produce a fault.
- n. Apply 1 VDC to 2TB5 and verify about 8.6 VDC at CP5 now jumper CP4 and CP3 together and the voltage should be cut in half. (PRESSION PS MUSIC PS TURNED OFF)
- 6. UPGRADES:
 - a. Rev 6 to Rev 7 for 0519L0291AA G001
 - i. Remove C26 and C27
- END.