REV NO. 1

P3K-AL-0053-A01

CONT ON SHEET 2 SH NO. 1

TITLE

CURRENT/VOLTAGE CONVERTER CIRCUIT BOARD TEST

FIRST MADE FOR 114D7371 G1 & G2

REVISIONS

10 yrs FEB 9 1976

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26 APR 1984 T O U O

General Description

The input to this board is a current signal from the output of the Rosemount transducer. The transducer output signal is 4 to 20 ma for a pressure change of 0 to rated pressure. The current to voltage converter changes this 4 to 20 ma current signal into a 0 to 5 VDC voltage signal at its output.

* NOTE: 114D7371 G2 has lag-lead network, special for X330.

Test Set-Up

1. Connect pin 17 to +30 VDC.
2. Connect pin 21 to -22 VDC.
3. Connect pins 1, 19 & 41 to HQ Gnd.
4. Connect a 10K resistor between pin 2 and pin 19.
5. Connect a 10K resistor between pin 39 and pin 19.
6. Connect a power supply capable of delivering 20 ma to pin 23 and pin 25.

Test Procedure * 114D7371 G1 and G2

Input voltages should be set to ± 10 MVDC. Output voltages should be read within ± 100 MVDC of stated values, unless specified otherwise.

1. Check to see that the TP4 voltage is +13 ±1.3 VDC.
2. Check to see that the TP2 voltage is -13 ±1.3 VDC. — 13 VDC
3. Turn R3 fully CW. The TP3 voltage should be at least +1.25 VDC.
4. Turn R3 fully CCW. The TP3 voltage should be at least -1.25 VDC.

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Test Procedure (con't.)

5. Set R3 for 0 VDC at TP3.

6. Apply 0 ma to pin 23. The TP1 voltage should be 0 VDC. Adjust R2, if necessary.

7. Apply +4 ma to pin 23. The TP1 voltage should be approximately -1.25 VDC. Adjust R3 for 0 VDC at TP1.

8. Apply +20 ma to pin 23. The TP1 voltage should be -5.0 VDC. Adjust R1, if necessary.

9. Apply +12 ma to pin 23. The TP1 voltage should be -2.5 VDC.

10. Turn R4 fully CW. The TP7 voltage should be at least +1.25 VDC.

11. Turn R4 fully CCW. The TP7 voltage should be at least -1.25 VDC.

12. Set R4 for 0 VDC at TP7.

13. Apply 0 ma to pin 25. The TP8 voltage should be 0 VDC. Adjust R5, if necessary.

14. Apply +4 ma to pin 25. The TP8 voltage should be approximately +1.25 VDC. Adjust R4 for 0 VDC at TP8.

15. Apply +20 ma to pin 25. The TP8 voltage should be -5.0 VDC. Adjust R6, if necessary.

16. Apply +12 ma to pin 25. The TP8 voltage should be -2.5 VDC.

17. Remove the circuit board from the test fixture and identify it with a suitable marking to show that it has been tested in accordance with this instruction.

18. Place oscilloscope on TP1. Check over operating range to see that there is no ripple content below 100 cps. Repeat test for TP8.

Rejections

If voltages as stated are not obtainable, or if any adjustments cannot be reached, the board should be rejected and Control Engineering notified.

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TITLE
CURRENT/VOLTAGE CONVERTER CIRCUIT BOARD TEST

FIRST MADE FOR 114D7371 G1 & G2

REVISION
1 OYMC FEB 9 1976

PREPARED BY: RE Squillace DATE 7-29-70

R. E. Squillace
Turbine Control Design Engineering

APPROVED BY: RC Callan DATE 10/12/70

P. C. Callan, Manager
Turbine Control Design Engineering

REVIEWED BY: R Dell Orfano DATE 7-31-70

R. Dell Orfano
EHC Test Engineer

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Data Sheet

Job # _____

Serial # _____

Date _____

Data Sheet for ___114D7371G0001_____

Test Procedure __P3K-AL-0053-A01_____

Burn-in Start _____

Burn-in Stop _____

Technician _____

Test Procedure Step	Nominal	Lower Limit	Pre-Burn in Results	Post Burn in Results	Upper Limit	Pot Values If applicable CW	CCW	Pass/Fail
1	+13V	+11.7V			+14.3V			
2	-13V	-11.7V			-14.3V			
3	> +1.25V							
4	< -1.25V							
5	0V	-.001V			+.001V			
6	0V	-.001V			+.001V			
6 - R2								
7	0V	-.001V			+.001V			
8	-5V	-4.99V			-5.01V			
8 - R1								
9	-2.5V	-2.49V			-2.51V			
10	> +1.25V							
11	< -1.25V							
12	0V	-.01V			+.01V			
13	0V	-.01V			+.01V			
13 - R5								
14	0V	-.01V			+.01V			
15	-5V	-4.99V			-5.01V			
15 - R6								
16	-2.5V	-2.49V			-2.51V			
17		0V			0V			
Comment: Tolerances tighten x 10 for Brunswick								

1/9/2012

cw