CD-5D019-02
ISSUE 1
APPENDIX 2B
DWG ISSUE 3B
DISTN CODE BT13

5ESS® SWITCHING EQUIPMENT
3 FAN UNIT AND ALARM CIRCUIT
FOR 6 FOOT CABINET

CHANGES

B. Changes in Apparatus

B.1 The 6 inch fan used in this fan unit will be replaced by an equivalent fan that is thermostatically controlled by a thermistor mounted on the fan. For field replacements, fans will be ordered by the customer and sent to the field for changeout in the existing fan units.

B.2 This change is being applied to reduce acoustic noise generated by the fan units.

B.3

SUPERSEDED	SUPERSEDED BY
B1-3 FANS APP FIG. 1	B1-3 FANS APP FIG. 1
A-C FANS APP FIG. 2	A-C FANS APP FIG. 1
KS22501L3	KS23912L1A
X OPTION	W OPTION

AT&T BELL LABORATORIES

DEPT 55531-JFW-MWR

5ESS™ SWITCHING EQUIPMENT
3 FAN UNIT AND ALARM CIRCUIT
FOR 6 FOOT CABINET

CHANGES

B. Changes in Apparatus

B.1 Added
Option Y, FS2, App Fig. 2.

B.2

Superseded	Superseded By
Option Z, FS1	Option Y, FS2

D. Description of Changes

D.1 The fan alarm circuit ED-5D195-30 is rated A&M.

D.2 The circuit module CM 242A will replace ED-5D195-30, and the fan alarm circuit function shall remain unchanged.

D.3 The fans are no longer powered using the DIODE ORING method; therefore, diodes CR1-CR6 were removed. Two fans receive power from one of the duplicated power distribution buses, and the remaining fan receives power from the other power bus.

F. Changes in CD Section

F.1 Section II applies only when ED-5D195-30 alarm circuit is used. When the 242A circuit module is used, Section II does not apply. The 242A circuit module has its own detailed description, which is part of the CMS-242A drawing.

AT&T BELL LABORATORIES

DEPT 55613-GM-JCB

5ESS™ SWITCHING EQUIPMENT FAN UNIT AND ALARM (6 FT) CIRCUIT

SECTION I - GENERAL DESCRIPTION

1. PURPOSE OF CIRCUIT

1.01 This circuit provides the interface between the alarm circuit located inside the fan unit and all possible 5ESS scanner circuits.

1.02 Each fan alarm provides three leads -- a power lead (+10V), a ground lead, and an alarm lead. The alarm lead negates whenever a failure occurs, and it remains active until reset by removing power.

SECTION II - DETAILED DESCRIPTION

1.01 The normal state of the scan and distribute (SD) points of terminals 14, 15 and 6 is low. Therefore, U4 is normally off and the second stage of U4 (pins 5 and 6) is on. This provides +10 volts to the fan alarms via pin 18.

1.02 The normal (no alarm) state of all fan alarm leads is high. Therefore, pins 5, 7 and 8 are high, which turns on U1a, U1b and U2a. Current is diverted away from pins 2, 3, 13 and 20 leaving all alarm LEDs off and U3a and U2b in the off state. When turned on, U3a provides an active low signal on pins 1, 17, and 19 to drive the alarm scan points. U2b provides a -48 volt return path via pin 4 resulting in frame LEDs lit whenever a fan alarm occurs.

1.03 Power is obtained from -48 volts on pins 24 and 21, which are then Or-ed together. The -48 volt return is on pin 22. This power energizes the board and also powers a dc-to-dc converter to obtain the required +10 volt fan alarm power.

SECTION III - REFERENCE DATA

1. WORKING LIMITS

1.01 Voltages:

-48V plus/minus 4.8 volts
+10V plus/minus 1.0 volt

1.02 Ambient temperatures:

0 to 70 degress C (at circuit pack)
0 to 50 degrees C (office aisle temp.)

2. FUNCTIONAL DESIGNATIONS

2.01 None

3. CONNECTING CIRCUITS

3.01 The following connecting circuits apply:

a. Interface Module Processor - SD-5D040-02
b. Single Shelf Interface Module Processor - SD-5D129-01
c. Fuse/Filter Panel - SD-5D053-01
d. 3B20D, Model 1, Peripheral Control Frame Circuit - SD-4C059-02
e. 3B20D, Model 1, Enclosed Peripheral Control Frame Circuit - SD-4C106-01
f. 3B20D, Model 2, Processor Control Frame Circuit - SD-4C100-01

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DEPT 55614-WAG-CEJ