

Technical Bulletin # 25

To: Coulometrics Support Personnel

From: Engineering Department

Date: REV 8-12-2004

Subject: Changes to Photodiode Cable Assembly on CM5200

Purpose:

This bulletin lists and describes recent adaptations that have been made to both the CM161-083 Photodiode Cable Assembly, and the CM110-046 Printed Circuit Board. Below is a procedure for making the necessary changes to the cable assembly and the circuit board.

Problem:

The current photodiode (light barrier) for carousel alignment has been discontinued, and is no longer available from our vendor. Because no known replacements of the same electrical values are available, production changes needed to be made. All CM5200 autosamplers beginning with serial # 995200004 will have the new photodiode assembly.

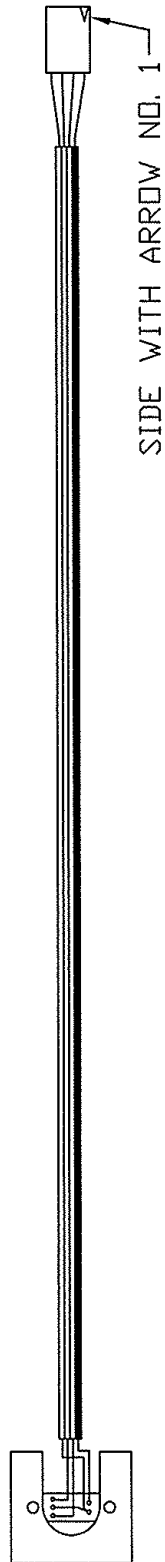
- I. The obsolete photodiode assembly consists of a mounting bracket, a photodiode, a 4-conductor ribbon cable, and a connector. It is assembled according to the drawing CM161-083 – Top section (MOC75T1). The replacement cable assembly consists of the same parts with the exception of the photodiode (Old: MOC75T1 / New: H21A1). Additionally, the wire connections are slightly different for the new photodiode. Refer to drawing CM161-083 – Bottom section (H21A1) for reference when connecting the new photodiode. (See Fig1)

- II. Accompanying the changes made to the cable assembly are changes made to the 8031 Microcontroller Board (CM110-046). To use the new cable assembly, resistor R11 (See Fig. 2), which currently has a value of 300 ohms, must be removed and replaced with a resistor of 2.2k ohms with a 5% tolerance. Remember this step when changing the cable assembly.

Figure 1

OPTICAL INTERRUPTOR CABLE ASSEMBLY

MDC75T1 LIGHT BARRIER



FOLLOW THIS DIAGRAM WHEN CHANGING TO NEW PHOTODIODE

H21A1, ECG 3100 (CURRENT PRODUCTION)



- NOTES:
- 1.) CUT CABLE TO 15"
 - 2.) SOLDER ALL CONNECTIONS
 - 3.) 1/2" LENGTH OF 1/16" HEAT SHRINK TUBING REQUIRED ON ALL SOLDERED CONNECTIONS
 - 4.) STRIP CABLE DOWN TO 4 CONDUCTORS WITH RED EDGE
 - 5.) CHANGE RESISTOR R11 ON CM110-046 FROM 300 OHM TO 2.2k OHM 5% FOR USE WITH H21A1 LIGHT BARRIER

