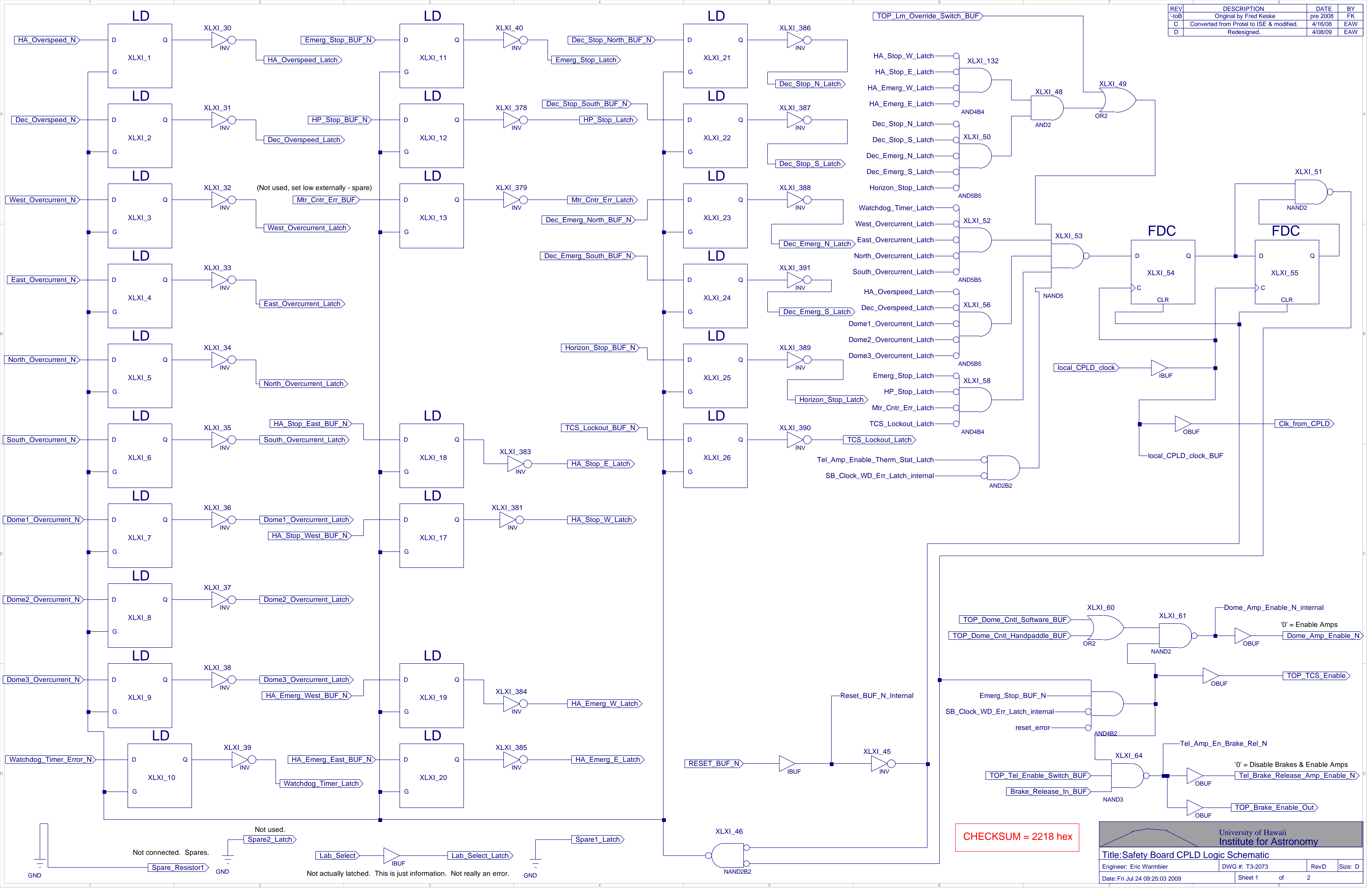


REV	DESCRIPTION	DATE	BY
-toB	Original by Fred Keske	pre 2008	FK
C	Converted from Protel to ISE & modified.	4/16/08	EAW
D	Redesigned.	4/08/09	EAW



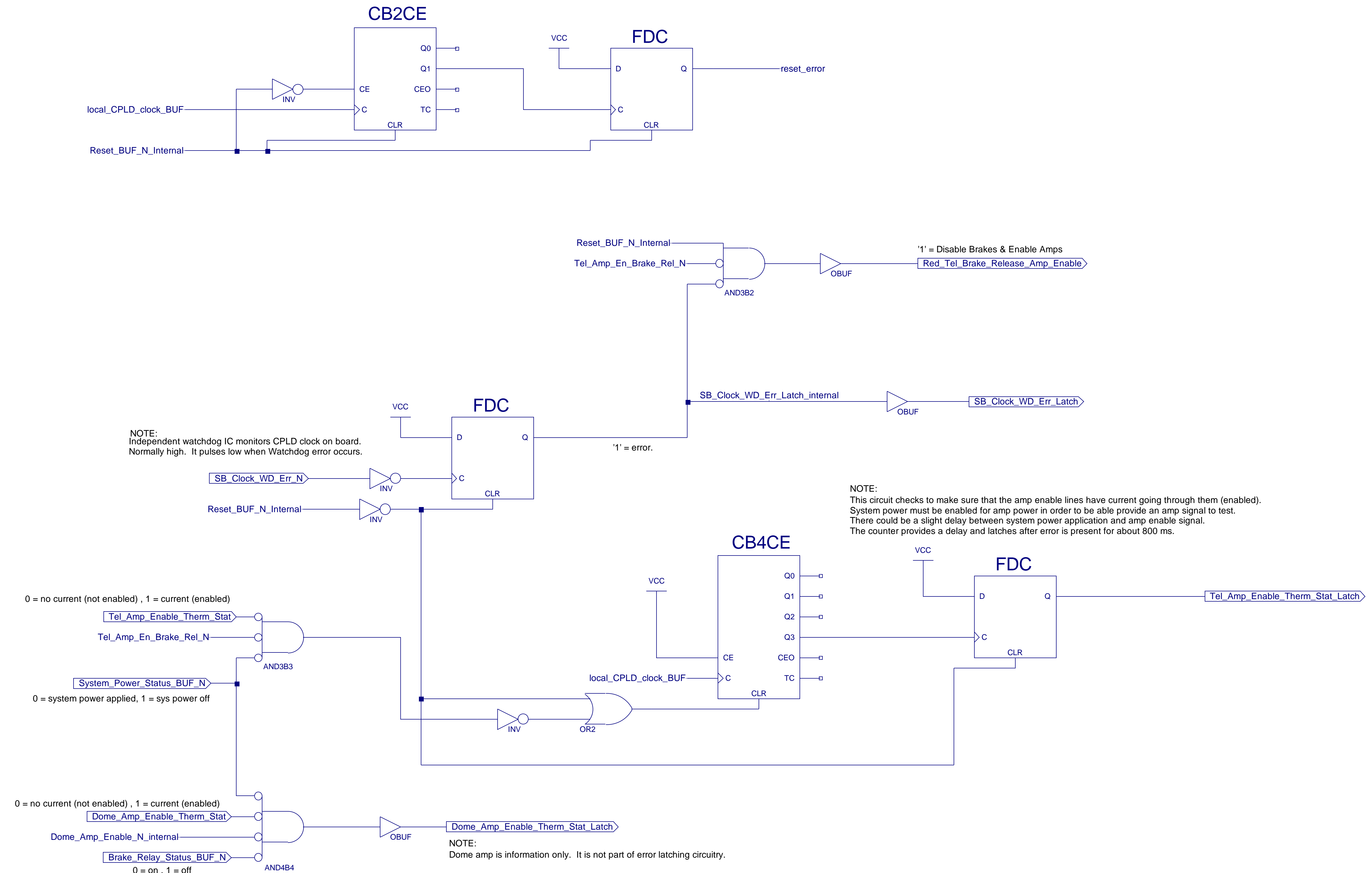
CHECKSUM = 2218 hex

University of Hawaii
Institute for Astronomy

Title: Safety Board CPLD Logic Schematic

Engineer: Eric Warmbier	DWG #: T3-2073	RevD	Size: D
Date: Fri Jul 24 09:25:03 2009	Sheet 1	of	2

REV	DESCRIPTION	DATE	BY
-toB	Original by Fred Keske	pre 2008	FK
C	Converted from Protel to ISE & modified.	4/16/08	EAW



NOTE:
Independent watchdog IC monitors CPLD clock on board.
Normally high. It pulses low when Watchdog error occurs.

NOTE:
This circuit checks to make sure that the amp enable lines have current going through them (enabled).
System power must be enabled for amp power in order to be able provide an amp signal to test.
There could be a slight delay between system power application and amp enable signal.
The counter provides a delay and latches after error is present for about 800 ms.

NOTE:
Dome amp is information only. It is not part of error latching circuitry.

0 = no current (not enabled) , 1 = current (enabled)
Tel_Amp_Enable_Therm_Stat
Tel_Amp_Enable_Therm_Stat
Tel_Amp_Enable_Therm_Stat
Tel_Amp_En_Brake_Rel_N
AND3B3
System_Power_Status_BUF_N
0 = system power applied, 1 = sys power off
0 = no current (not enabled) , 1 = current (enabled)
Dome_Amp_Enable_Therm_Stat
Dome_Amp_Enable_Therm_Stat
Dome_Amp_Enable_Therm_Stat
Dome_Amp_Enable_N_internal
Brake_Relay_Status_BUF_N
AND4B4
0 = on , 1 = off

This 4 input AND gate with inverted inputs is really asking:
1) Is system power on?
2) AND is the amplifier commanded to be enabled?
3) AND is the brake relay on?
4) AND is there no current in the enable line (not pulled down = disabled)
This means the amps should be enabled, but no current is detected.
That's a problem. Thermal fuse could be blown or wire disconnected.