

CS Bulletin AS-1003
AIRSYS ALARM output wiring
Recommendations

March 25, 2013

RE: Software Revision 13B37 has been shipping in **AIRSYS** controllers since Nov 2012 and does not map alarm outputs that correspond directly with the new VzW shelter standard. This bulletin shows how to connect the existing **AIRSYS** alarm outputs to specified locations in the punch down block referenced in the VzW Cell Site Shelter Standards: Alarm Block Low Voltage Wiring Schematic E501.

NOTE: Alarm inputs (DG Run, Smoke/Fire) are not addressed in this bulletin as they correspond directly to the VzW shelter standards

I. Distribution:

- Shelter manufacturers purchasing AIRSYS HVAC systems
- VzW corporate engineering

II. ISSUE:

Present alarm configuration and reporting from AIRSYS ASLLC.2 Lead/Lag controller does not match HVAC alarm connections called out in Verizon Wireless Cell Site Shelter Standards. This memorandum is a recommendation on the best method for connecting the AIRSYS available form C contact alarms outputs **in their present configuration** to the available alarm connections listed in the Alarm Block Low Voltage Wiring Schematic drawing E501.

III. RESOLUTION:

The recommendation illustrated in the table below will keep the existing AIRSYS alarm reporting capability presently available so the AIRSYS systems on new shelters will meet alarm reporting commitments already made to specific markets (i.e. 2nd compressor run)

	AIRSYS ALARM OUTPUTS		VzW Cell Site Shelter Standards (ALARM BLOCK LOW VOLTAGE WIRING SCHEMATIC E501)	Comments
1	WPU1 Lockout	Maps To	HVAC FAIL 1	
2	WPU2 Lockout	Maps To	HVAC FAIL 2	
3	High Temp	Maps To	HIGH TEMP	In series with analog sensor
4	2nd Compressor Run	Maps To	HVAC FAIL 3	Works for Two WPU sites
	No Connections		HVAC DIRTY FILTER	No Connections
	No Connection		HVAC ECONOMIZER FAILURE	No Connection

Rational for mapping recommendation:

#3 AIRSYS High Temp to HIGH TEMP

As listed in the table above if this is connected to the High Temp Alarm thermostat you are getting a redundant alarm. If either one triggers the high temp alarm will signal. In series if both are NC. In parallel if both are NO.

#4 AIRSYS 2nd Compressor Run to HVAC FAIL 3

The 2nd compressor run signal is a metric utilized by several markets in the Northeast. The AIRSYS controller produces the alarm signal whenever the LAG unit compressor is asked to assist the LEAD unit compressor already in Mechanical cooling mode. Whenever the Lag unit compressor is needed to help maintain site temperature this indicates the match between HVAC capacity and site load is out of compliance. This can be an important early indication of a degraded HVAC system or a change in the native heat load of the site that warrants a non-critical site visit.

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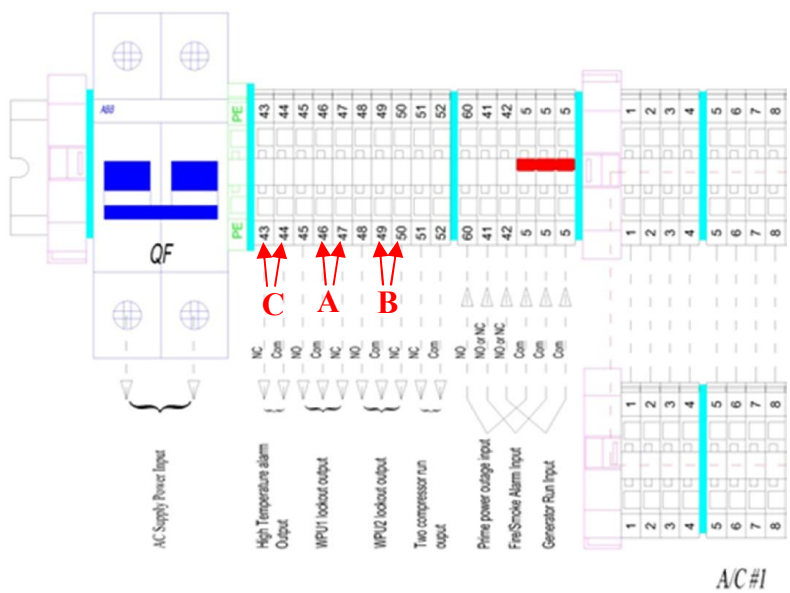
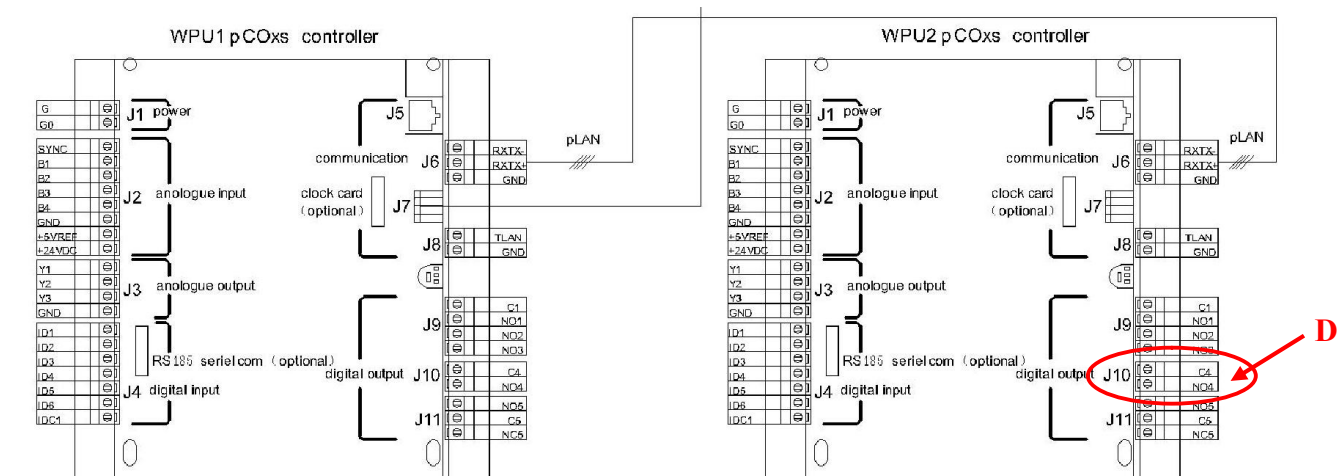
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OUTPUT ALARM WIRING CONNECTIONS

REF #	VzW Cell Site Shelter Standards (ALARM BLOCK LOW VOLTAGE WIRING SCHEMATIC E501)	NO/NC	Wire to ASLLC.2 Terminals in AIRSYS Lead/Lag controller	AIRSYS Signal Name	NOTE
A	HVAC FAIL 1	NC	46 & 47	WPU1 Lockout	
B	HVAC FAIL 2	NC	49 & 50	WPU1 Lockout	
C	HIGH TEMP	NC	43 & 44	HIGH TEMP	In series w analog sensor
D	HVAC FAIL 3	NC	Unit #2 Controller J10: NO4 & C4	2nd Compressor Run	
	HVAC DIRTY FILTER	NC	NONE	N/A	
	HVAC ECONOMIZER FAILURE	NC	NONE	N/A	

INSIDE ASLLC.2 CONTROLLER BOX ASSEMBLY

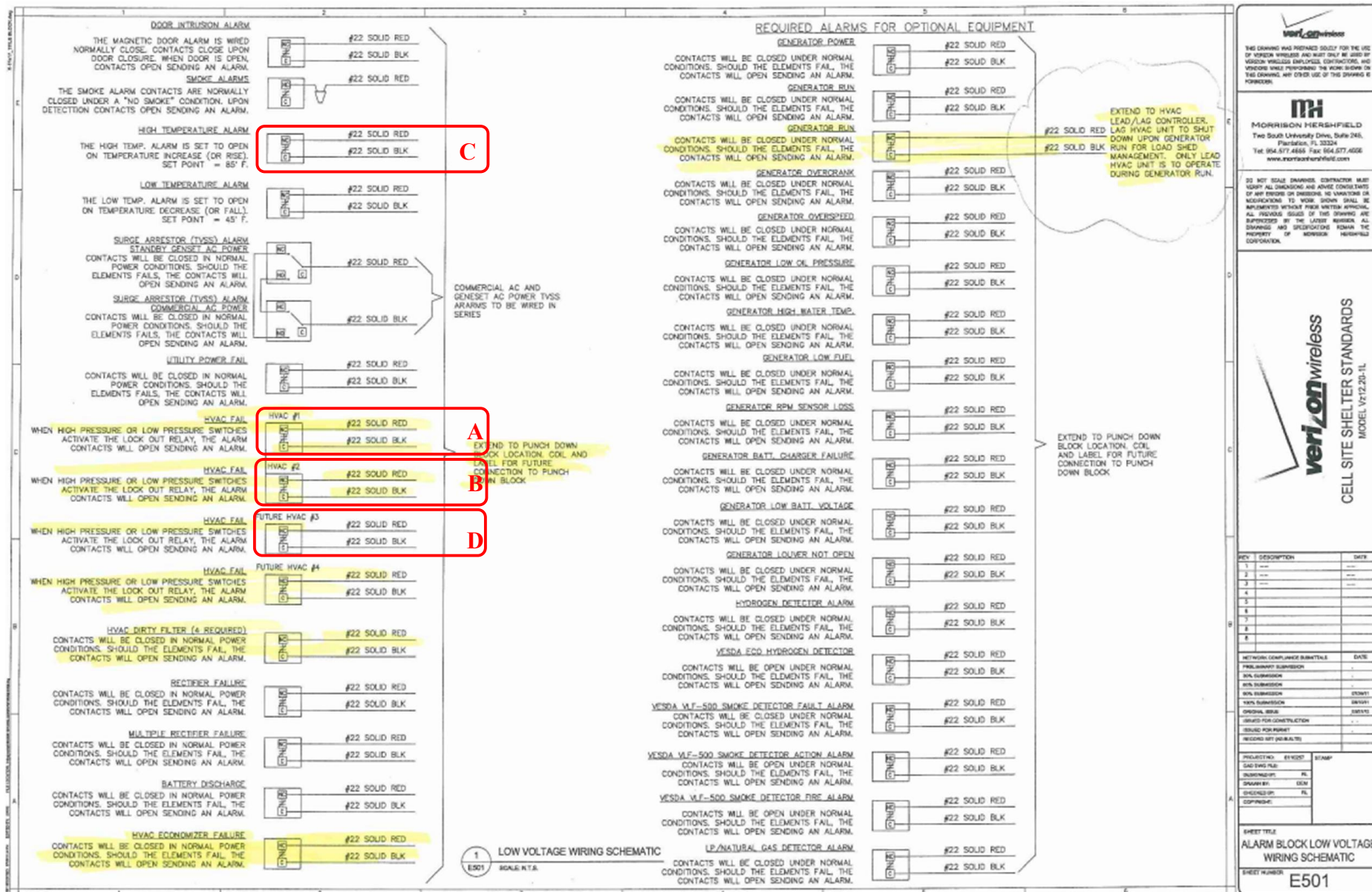


**For questions please contact the
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verizon wireless
CELL SITE SHELTER STANDARDS
MODEL VZ122B-1L

REV	DESCRIPTION	DATE
1	---	---
2	---	---
3	---	---
4	---	---
5	---	---
6	---	---
7	---	---
8	---	---

DESCRIPTION	DATE
1. PRELIMINARY SUBMITTAL	---
2. IMA SUBMISSION	---
3. IMA SUBMISSION	---
4. IMA SUBMISSION	---
5. IMA SUBMISSION	07/2011
6. IMA SUBMISSION	08/2011
7. ORIGINAL BILL	08/2011
8. ISSUED FOR CONSTRUCTION	---
9. ISSUED FOR PERMIT	---
10. REVISION SET (SUBMITTAL)	---

PROJECT NO.	EVENT	STATUS
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SHEET TITLE
ALARM BLOCK LOW VOLTAGE WIRING SCHEMATIC

SHEET NUMBER
E501