



Service Guide

Part # : L19865

Date: 07/28/2025

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Subject: Upgraded M12 Electrical Cables (Turck) on Sukup Grain Dryers

REVISIONS: Updated tables showing M12 cable and bulkhead part numbers (page 30).

05/15/2025: Added "Turck" to Subject line.

Overview: Sukup Cross-Flow (Portable) and Mixed-Flow Grain Dryers are equipped with electrical cables that allow for easy connections to main power box, heaters, controls and junction boxes. Beginning with dryers manufactured in 2025, many cables were upgraded to make them more durable.

Pictures below and on Pages 2 & 3 show M12 cables and various connections. Pages 4-29 show wiring diagrams. Page 30 shows M12 cable and bulkhead (port) part numbers. Page 31 shows locations of components on common special-order dryers.

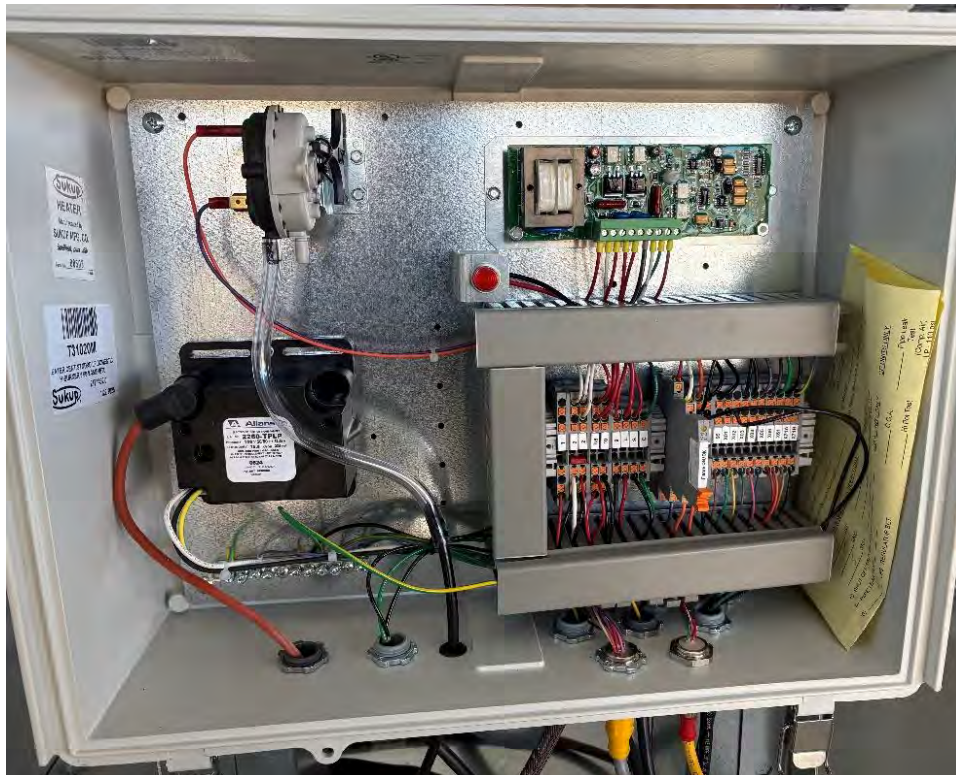


Image 1 - Heater box with M12 cables attached



Image 2 - Stickers on bottom of heater box identifying M12 cable connection ports

PARTS REPLACEMENT OR REPAIR AT COMPANY EXPENSE NOT AUTHORIZED UNLESS SUCH POLICY IS STATED.

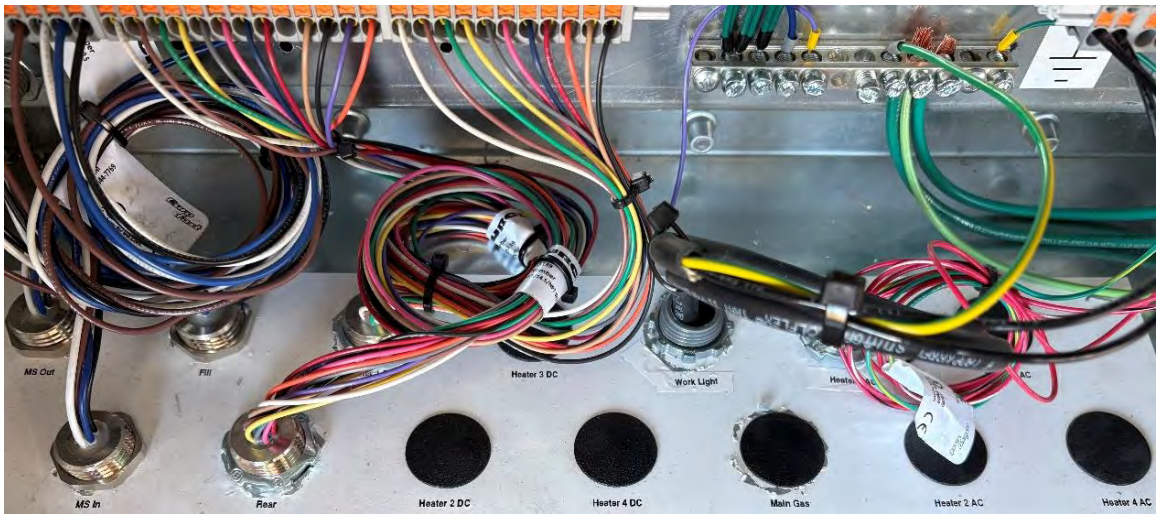


Image 3 - Sticker in left side of main power box



Image 4 - Sticker on bottom of box identifying cable connection ports

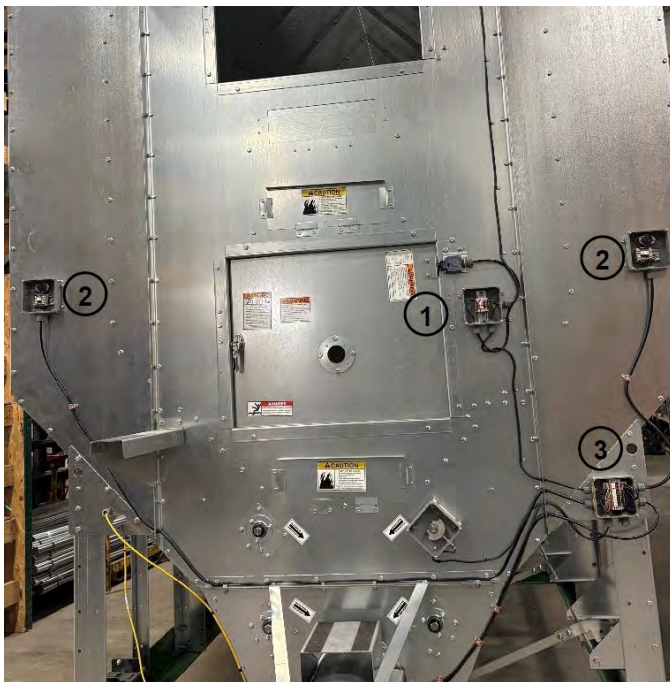


Image 5 - Door switch (1), column over-temp switches (2) & right rear junction box (3) on crossflow dryer

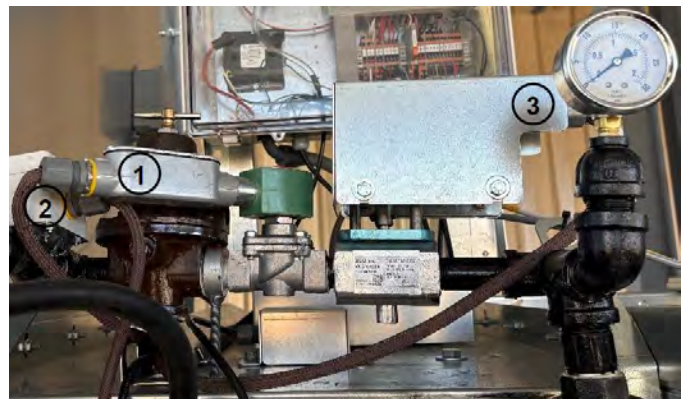


Image 6 - Cable connections to solenoid junction box (1), vapor OT switch (2) & electronic fuel valve actuator (3)

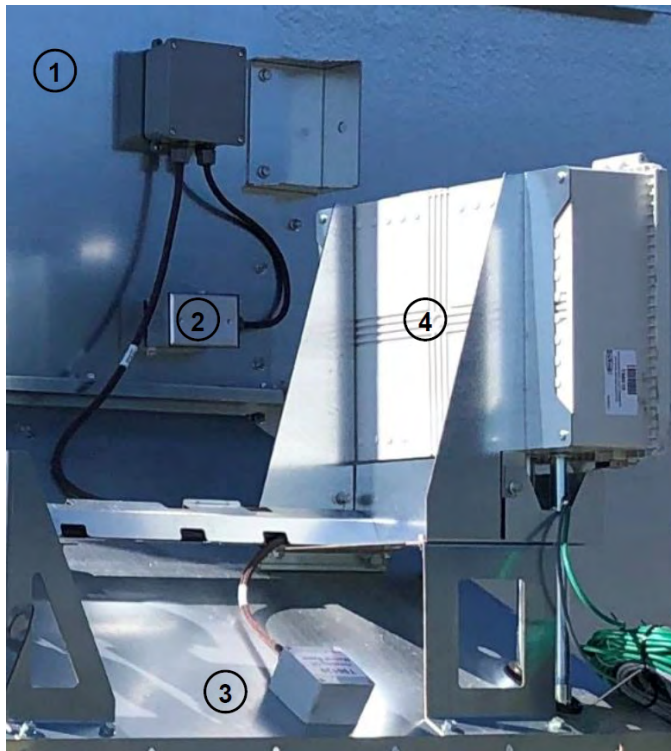


Image 7 - Control switch boxes on mixed-flow dryer (Plenum OT switch (1), Plenum RTD (2), heater housing high-limit switch (3), & heater box (4))



Image 8 - Paddle switch for cross-flow dryer

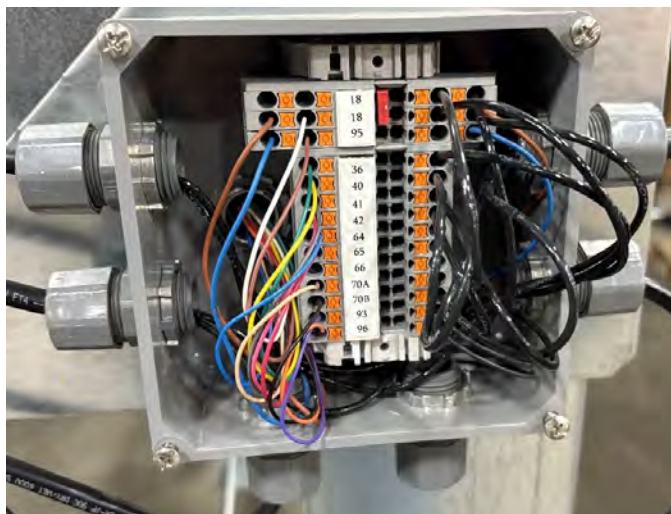


Image 9 - Weathertight connections on right rear junction box

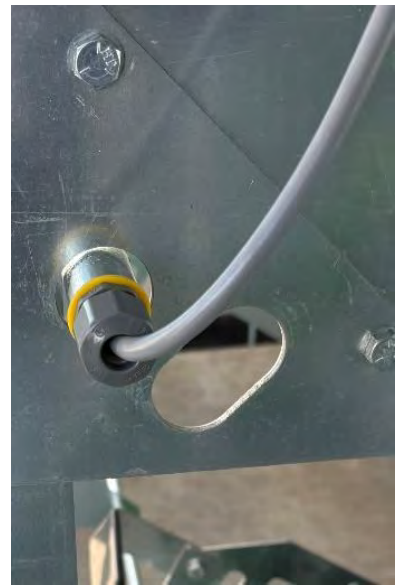
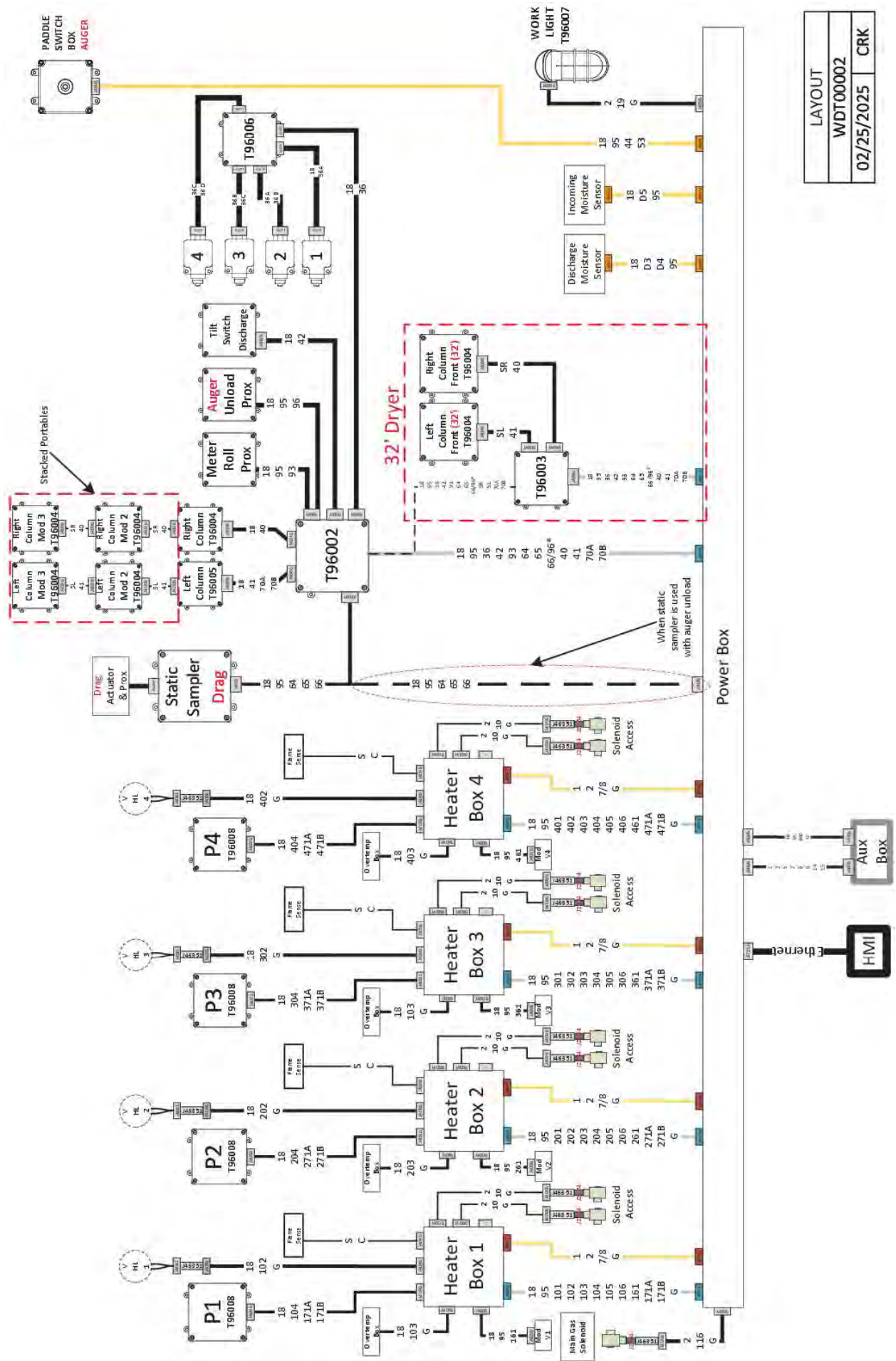


Image 10 - Cable (at front of dryer) from right rear junction box



Image 11 - Work light cable & column over-temp capillary on front of cross-flow dryer



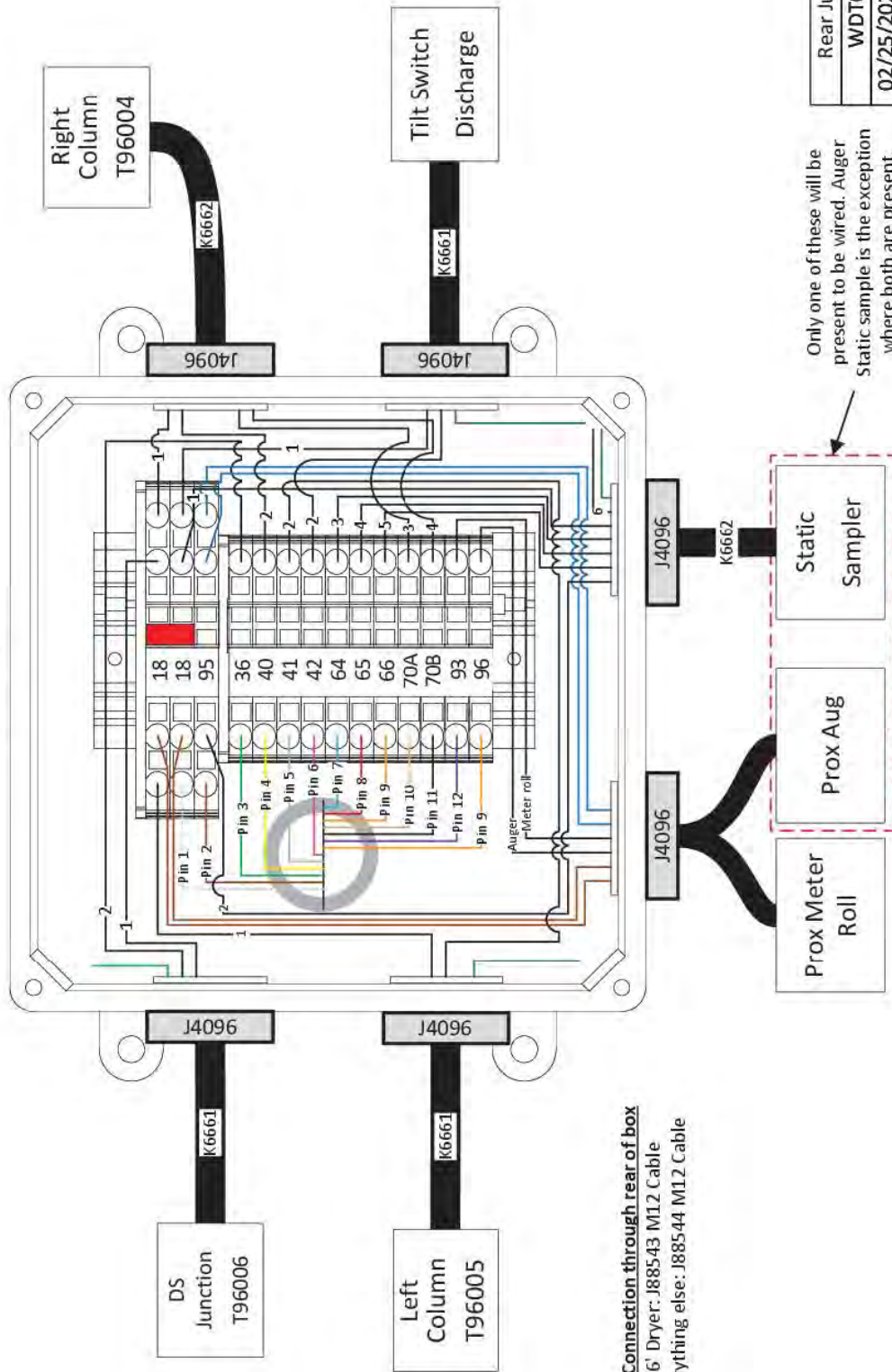
LAYOUT
WDT000002
02/25/2025
CRK

M12 Cable Pinout

- Pin 1 – White
- Pin 2 – Brown
- Pin 3 – Green
- Pin 4 – Yellow
- Pin 5 – Grey
- Pin 6 – Pink
- Pin 7 – Blue
- Pin 8 – Red
- Pin 9 – Orange
- Pin 10 – Tan
- Pin 11 – Black
- Pin 12 – Violet

Pin 9: wired according to dryer unload type:

- Drag – 66
- Auger – 96

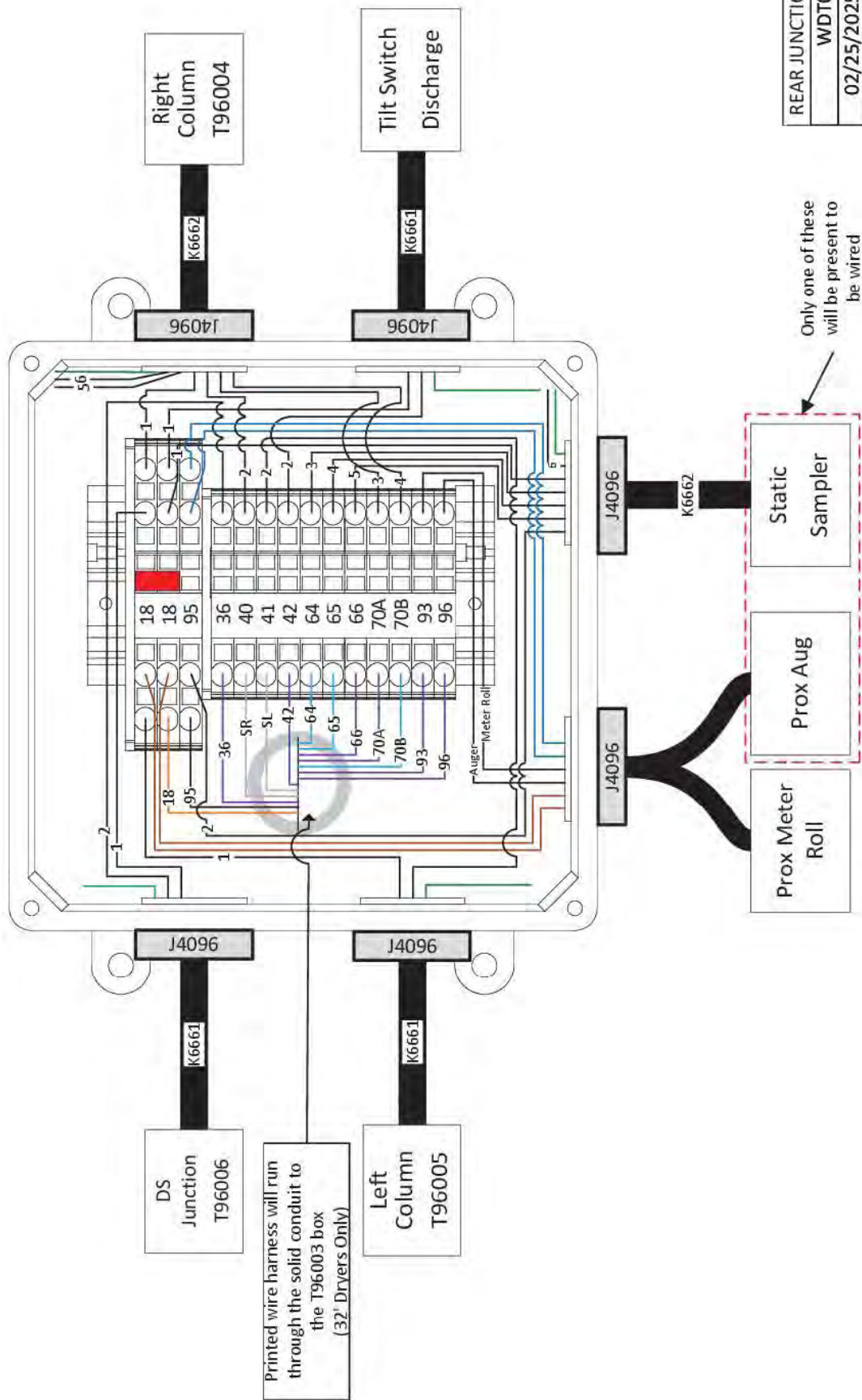


M12 Connection through rear of box

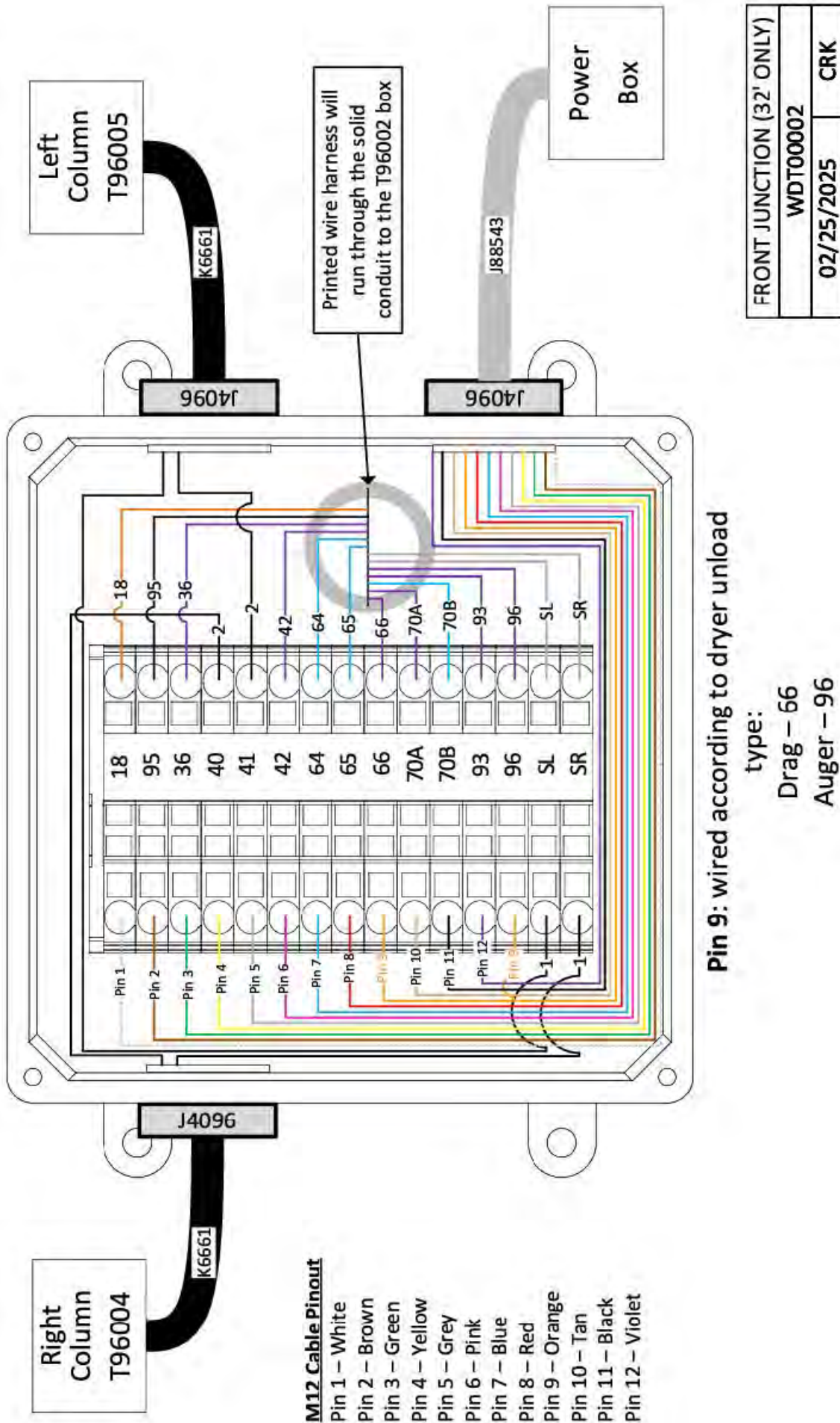
- 16' Dryer: J88543 M12 Cable
- Everything else: J88544 M12 Cable

Only one of these will be present to be wired. Auger Static sample is the exception where both are present.

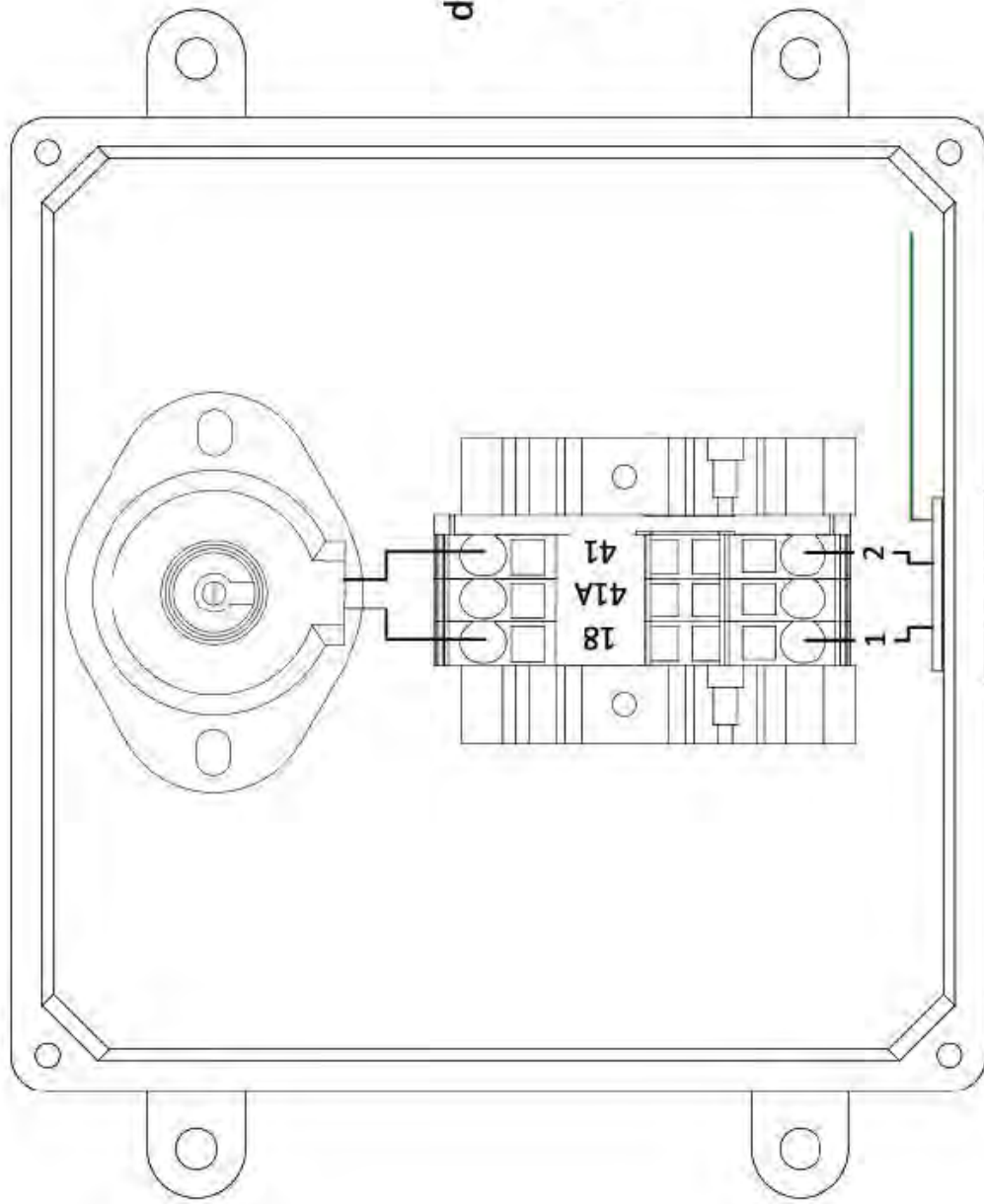
Rear Junction
WDT00002
02/25/2025
CRK



REAR JUNCTION (32' ONLY)		
WDT00002		
02/25/2025	CRK	



FRONT JUNCTION (32' ONLY)		
WDT00002		
02/25/2025	CRK	



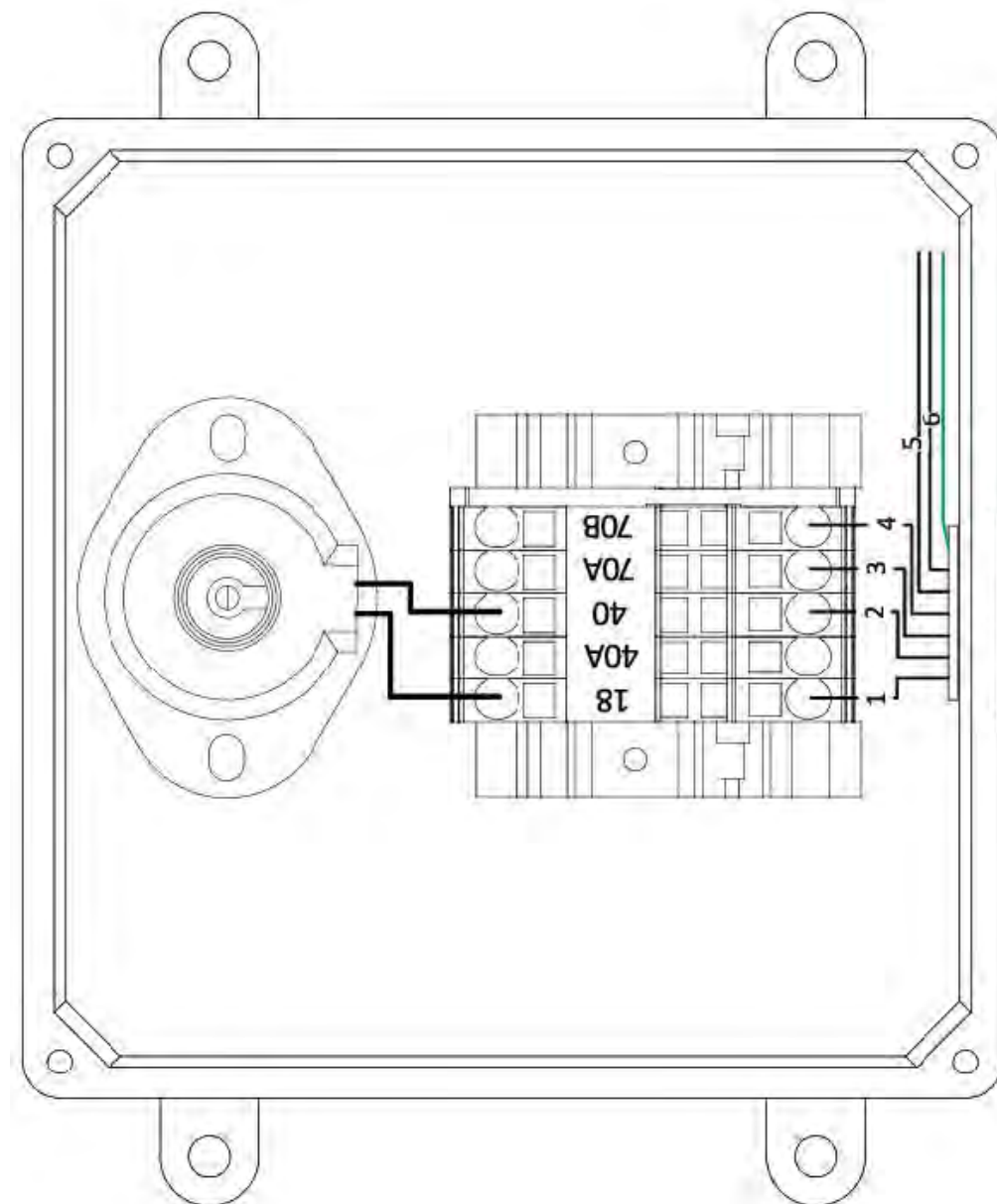
Terminal labels vary depending on which side the assembly is used for.
 Left column: 18, 41A, 41
 Right column: 18, 40A, 40

COLUMN
WDT00002
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Junction
 Box
 T96002

J4096

K6561



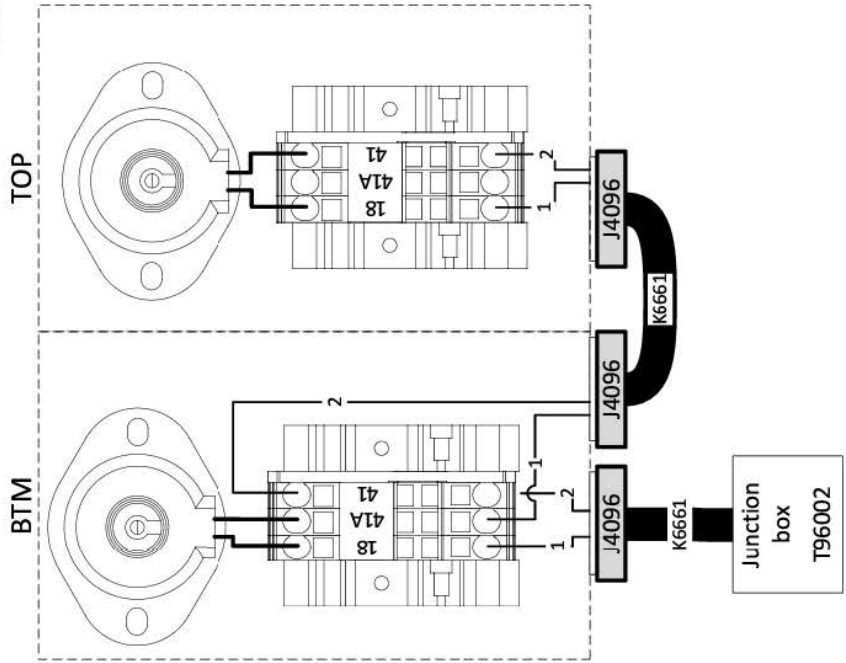
Placed in the Lower Left Column. Check Layout for further clarification.

COLUMN TEMP READ		
WDT00002		
02/25/2025	CRK	

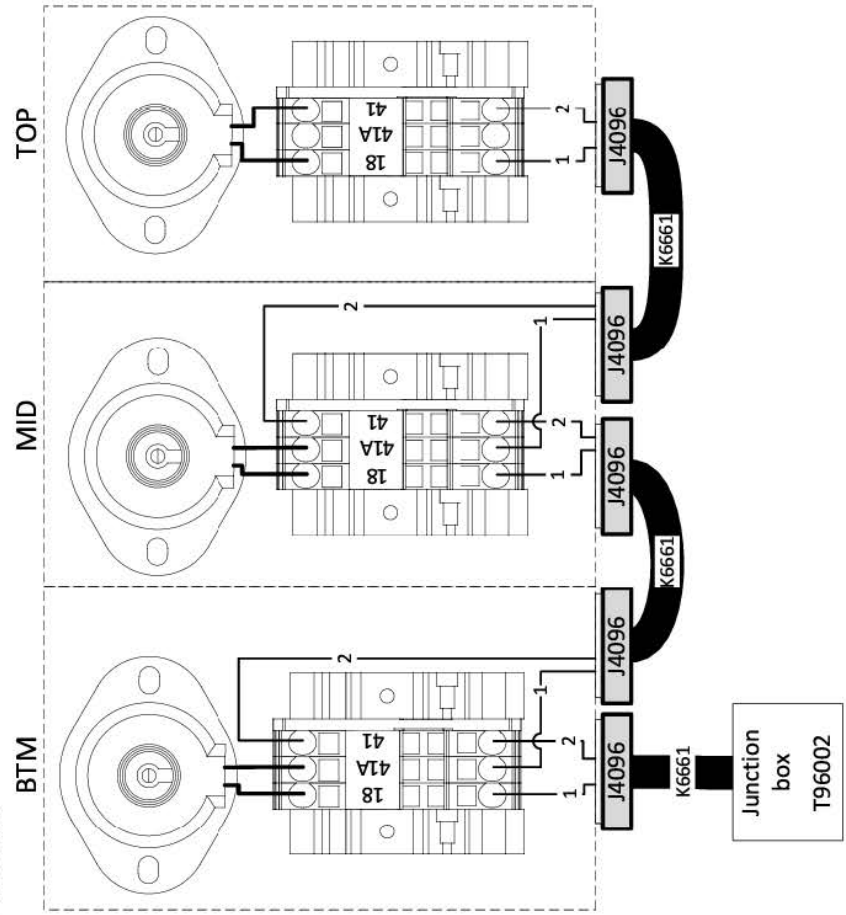
Junction box	T96002
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The drain holes in T96004 and T96005 serve as pilot holes for adding a 0.875" hole for additional cable glands (J4096) in the event of columns wired in series

Double Stack



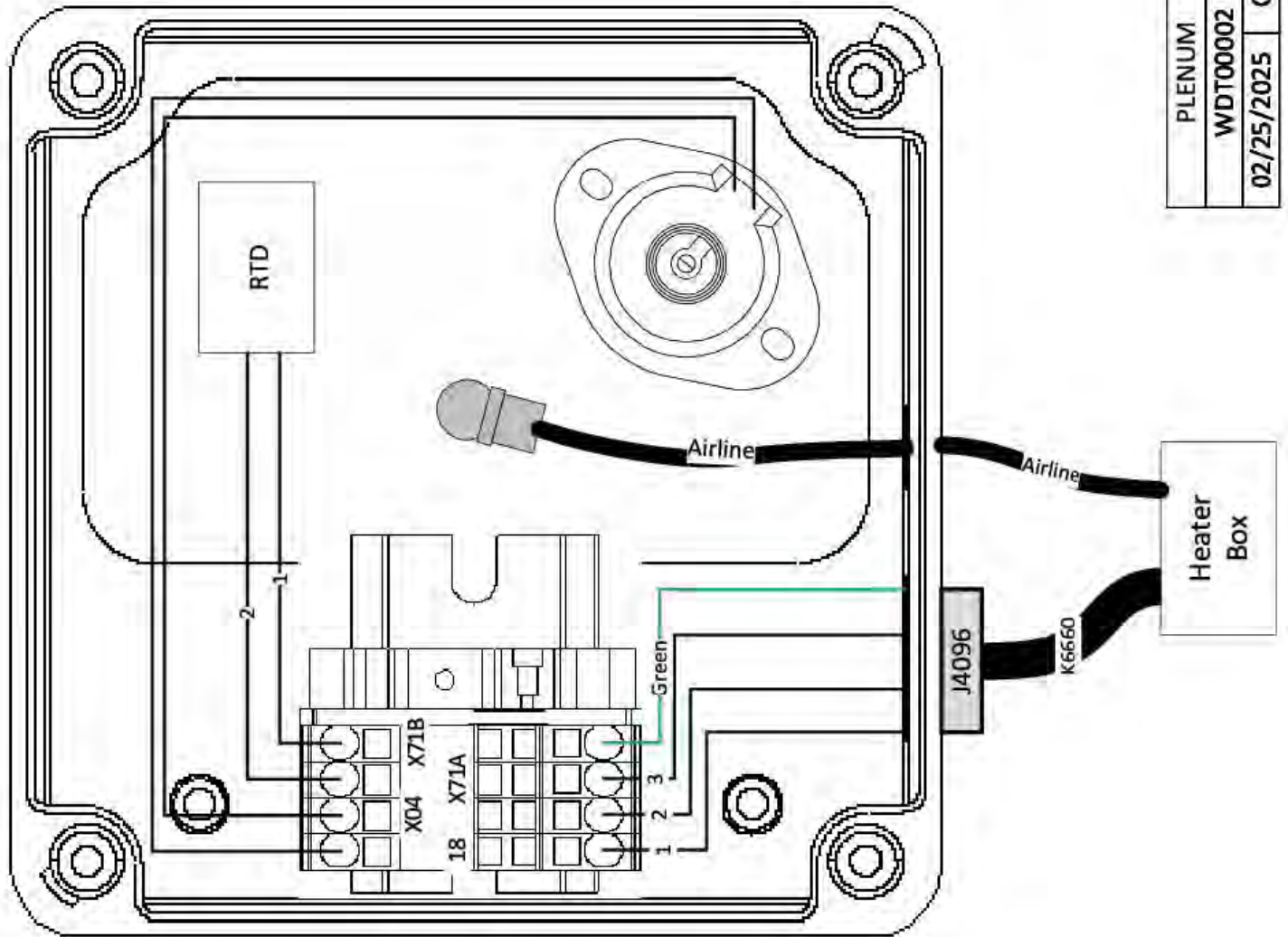
Triple Stack



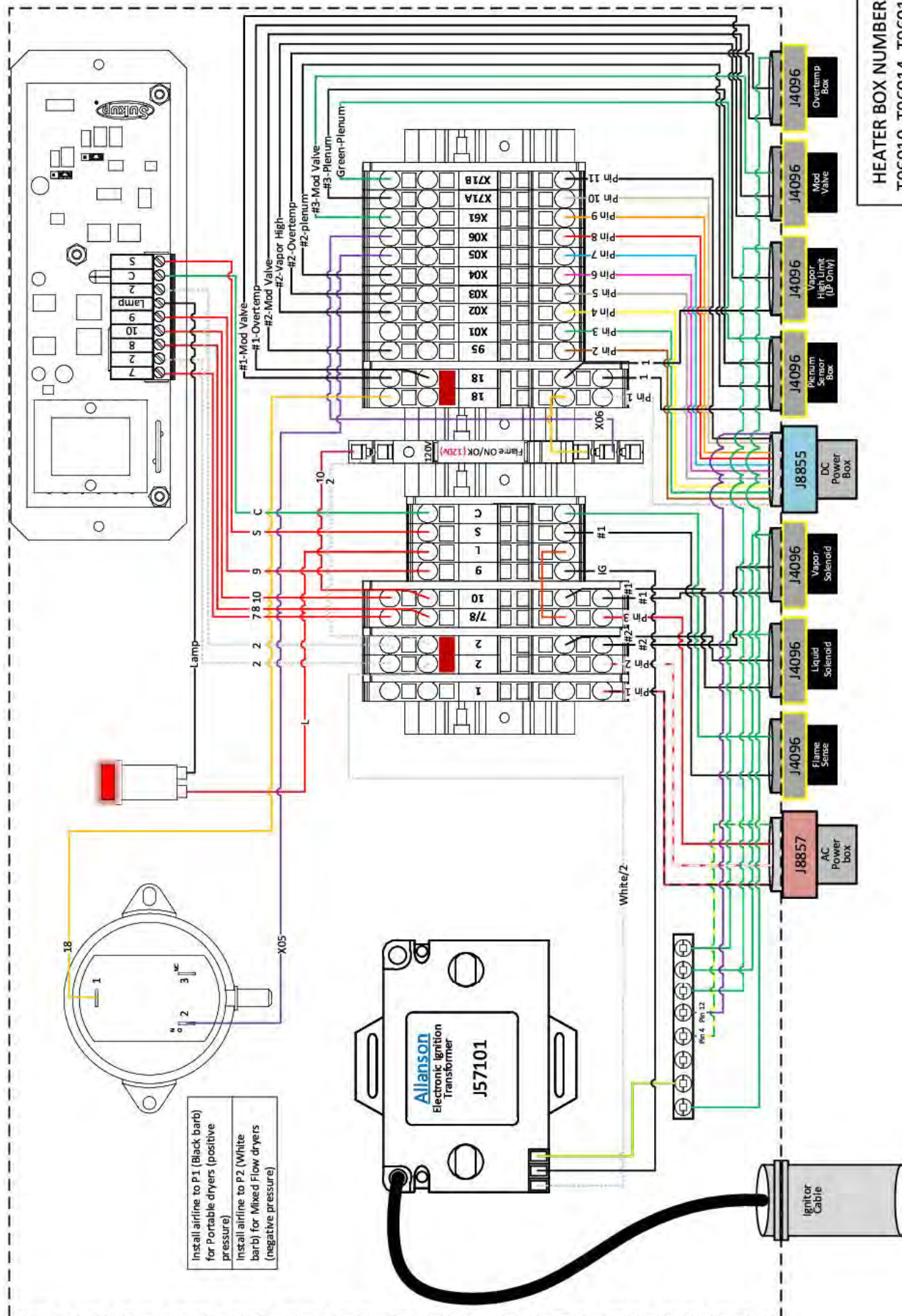
Terminal labeling varies depending on left or right column application. Wiring concept remains the same in both instances.

- Left column applications would be 41 and 41A as shown here.
- Right column applications would be 40 and 40A.

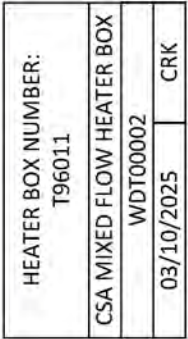
COLUMNS IN SERIES (PORTABLES)
WDT00002
02/25/2025
CRK

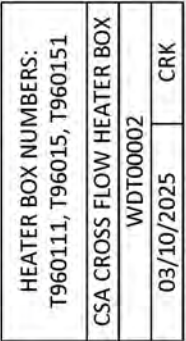


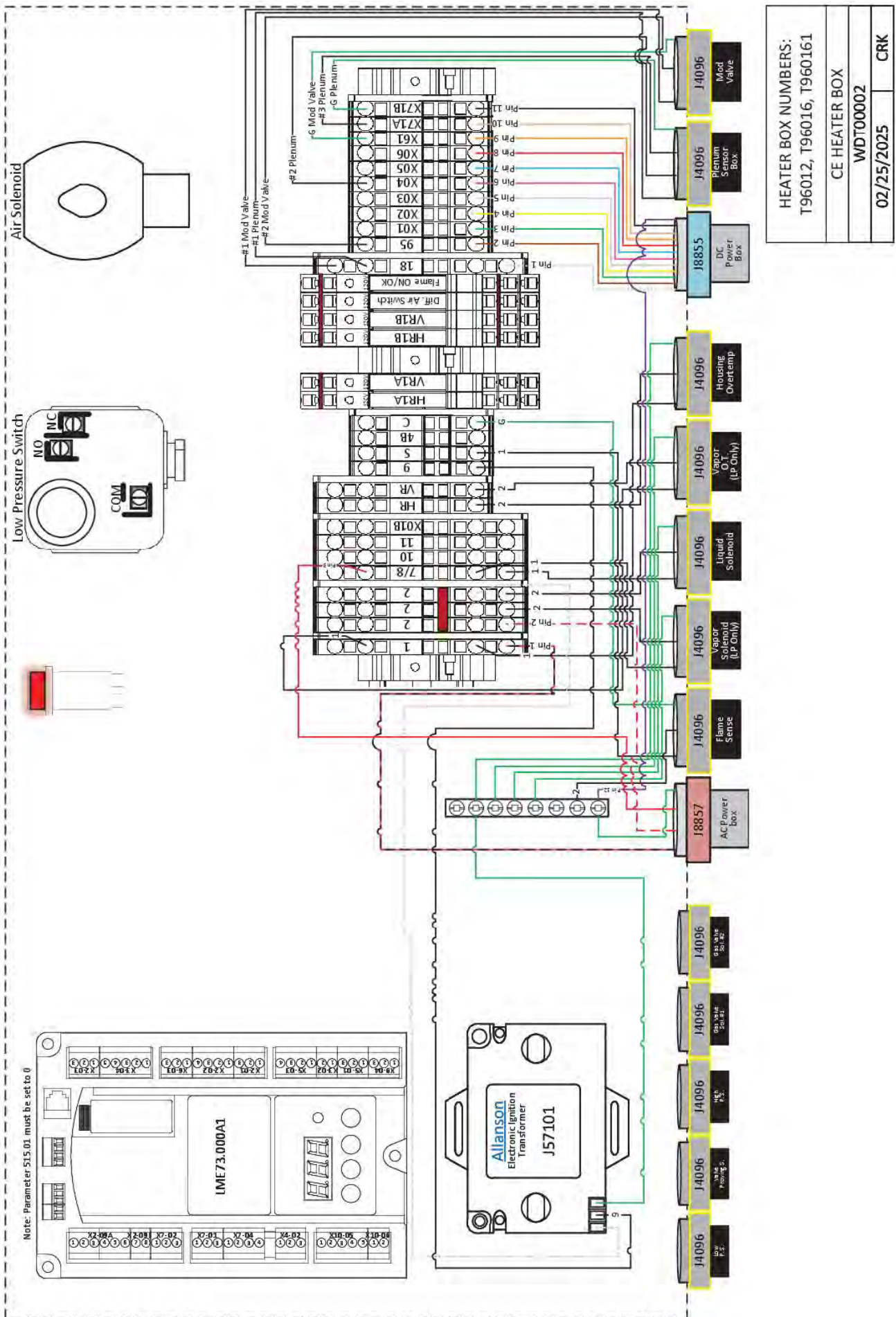
PLENUM	
WDT000002	
02/25/2025	CRK

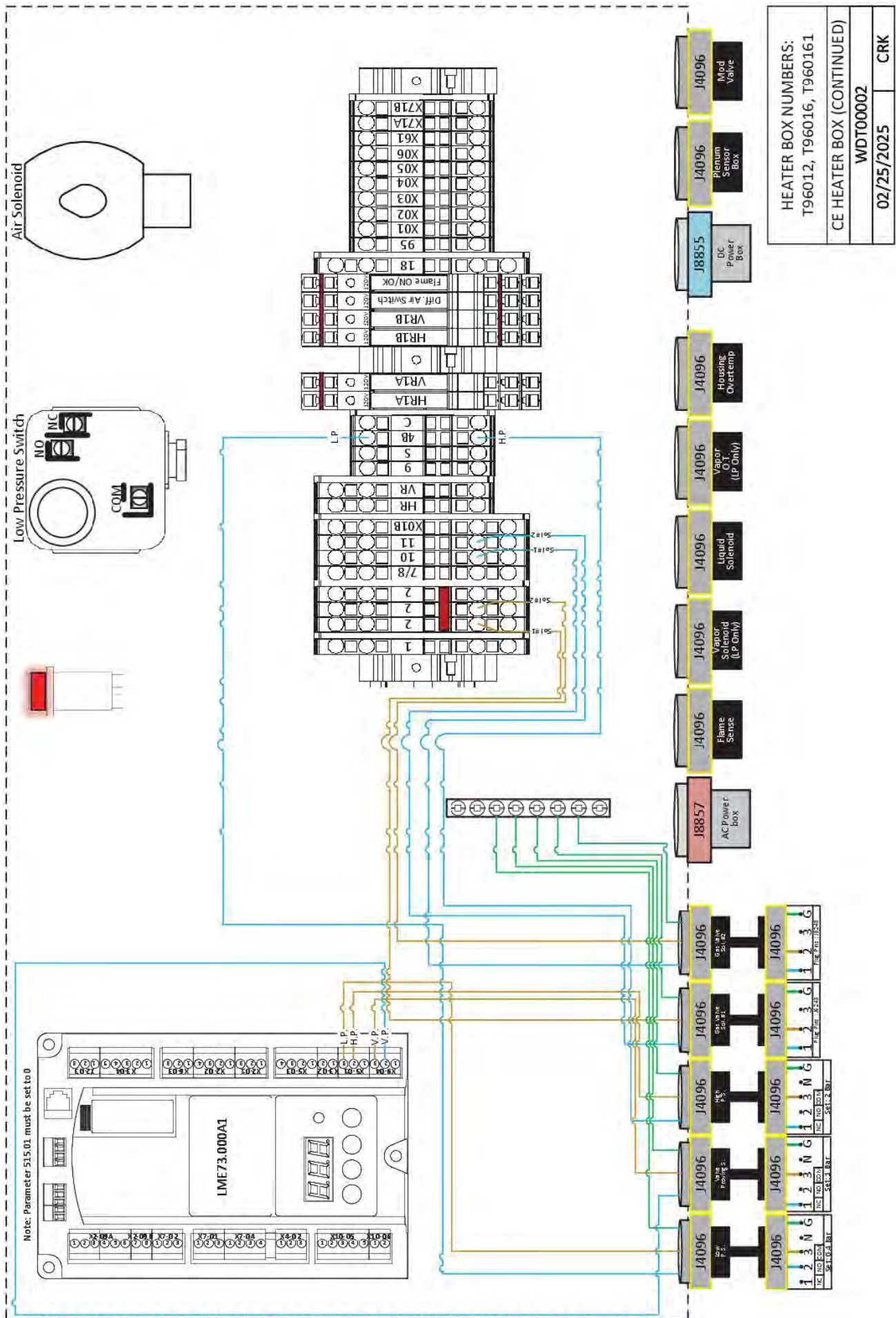


HEATER BOX NUMBERS:		
T96010, T96014, T960141		
DOMESTIC HEATER BOX		
WDT00002		
02/25/2025	CRK	

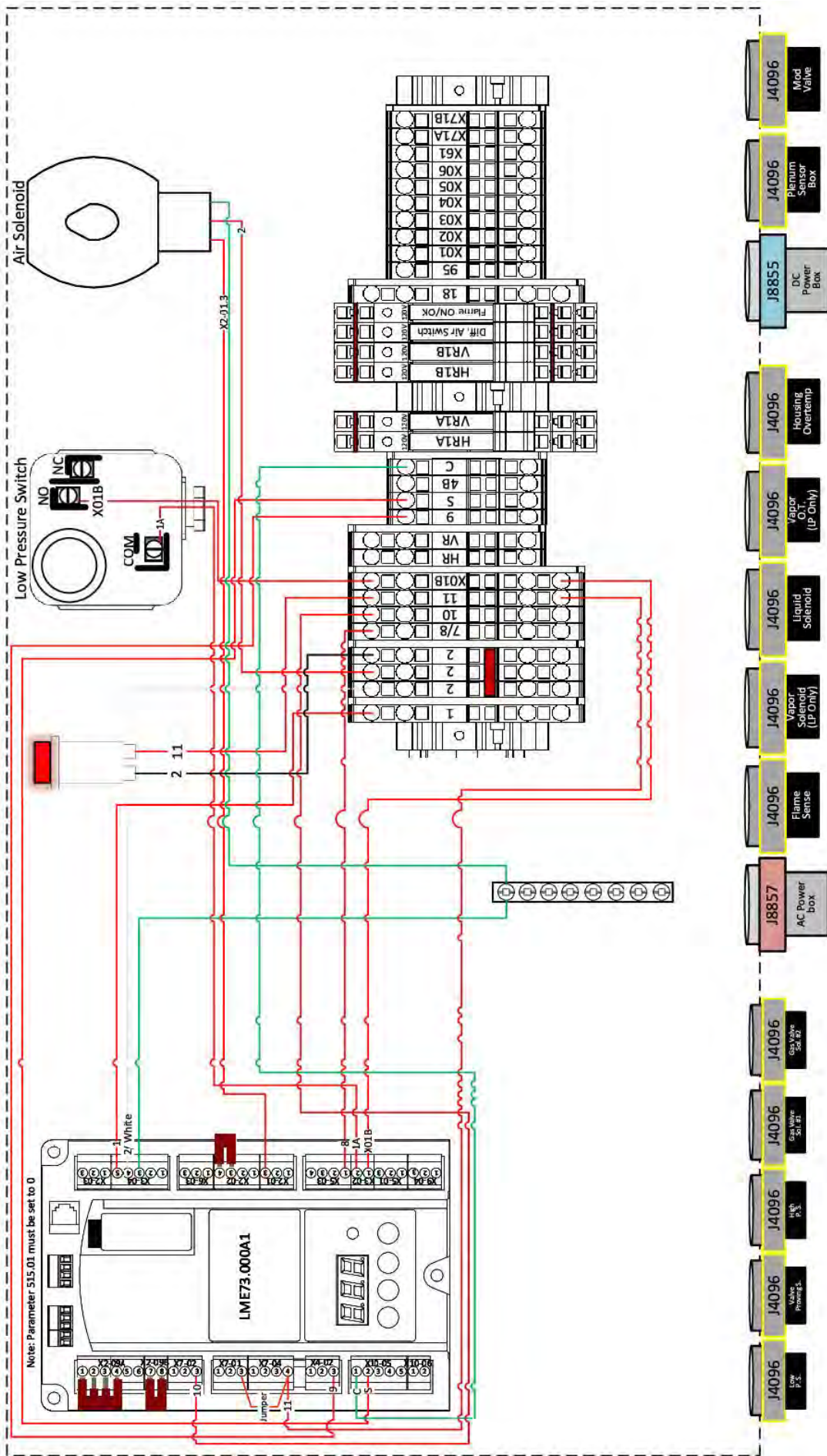




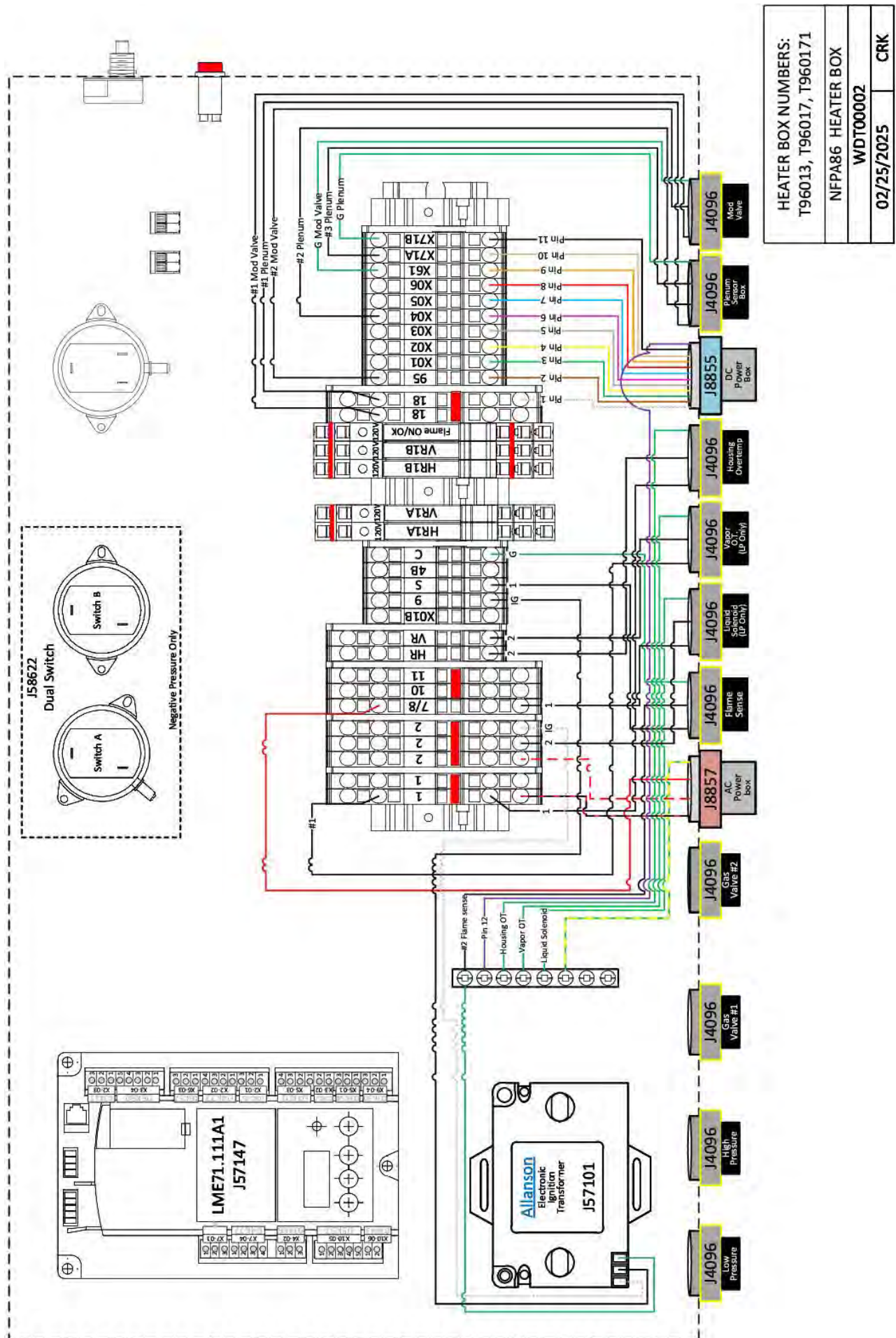




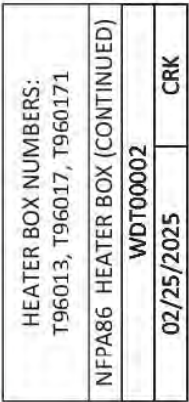
HEATER BOX NUMBERS: T96012, T96016, T960161	
CE HEATER BOX (CONTINUED)	
WDT00002	
02/25/2025	CRK

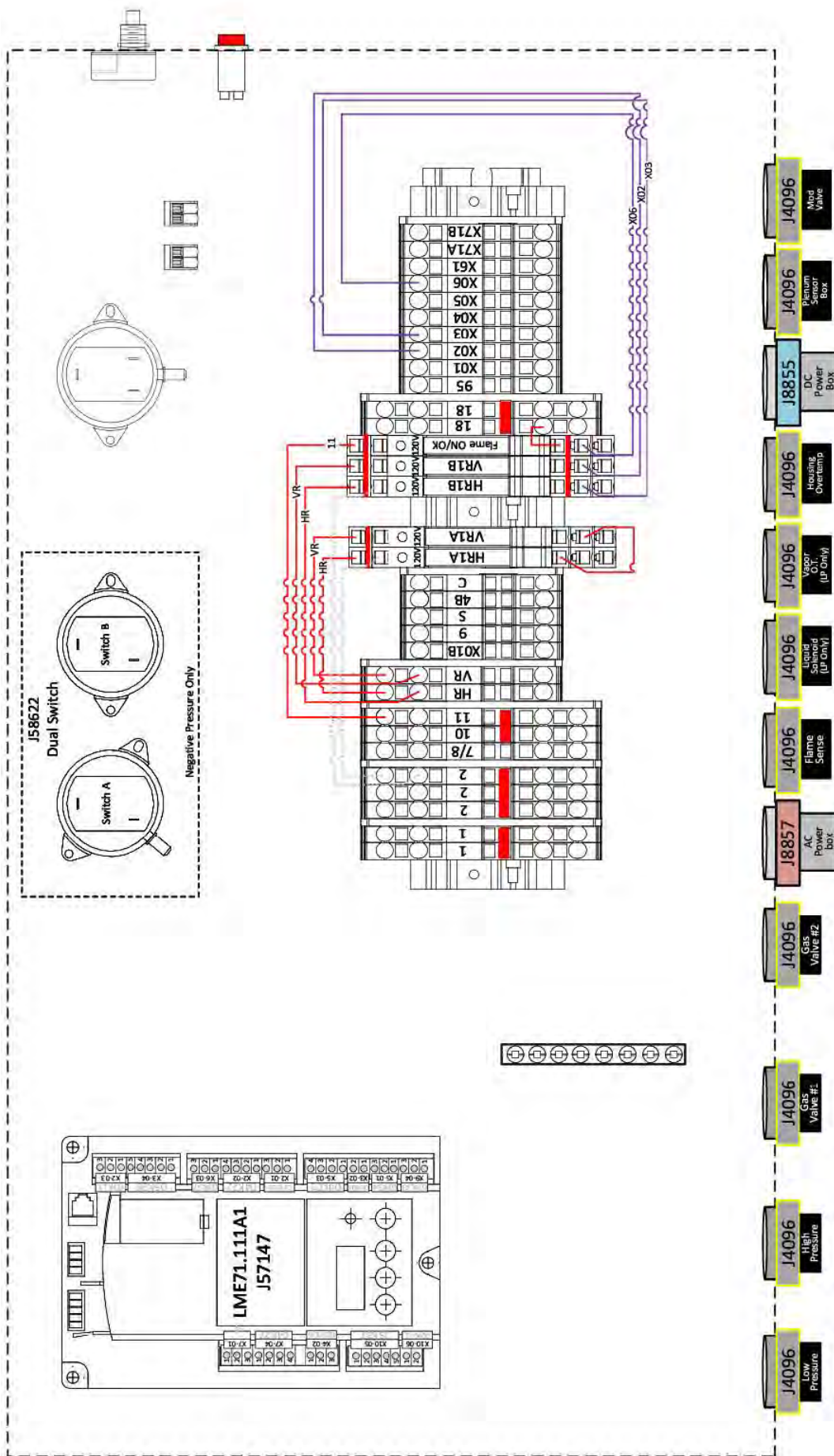


HEATER BOX NUMBERS: T96012, T96016, T960161	
CE HEATER BOX (CONTINUED)	
WDT00002	
02/25/2025	CRK

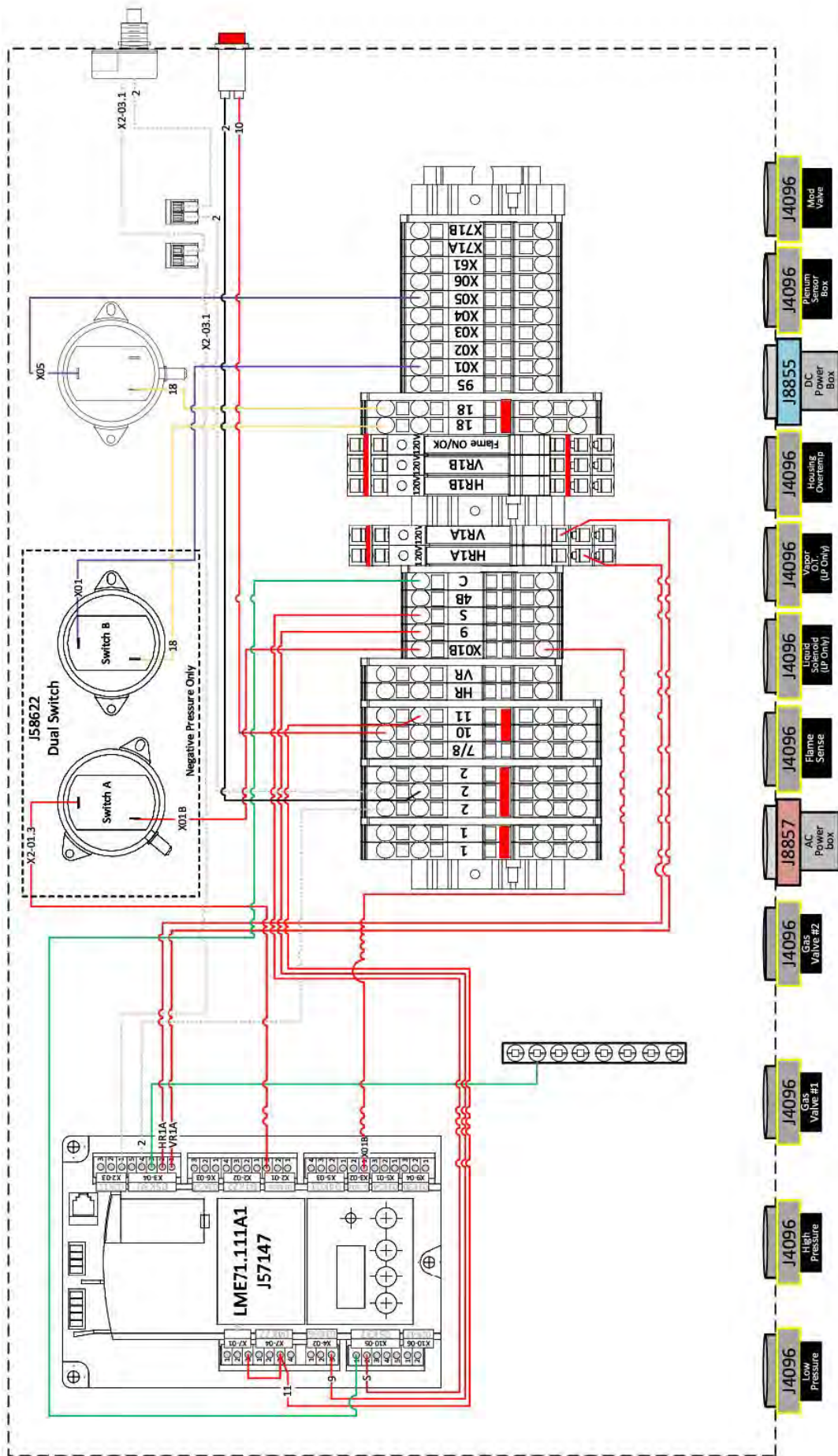


HEATER BOX NUMBERS:	
T96013, T96017, T960171	
NFA86 HEATER BOX	
WDT00002	
02/25/2025	CRK

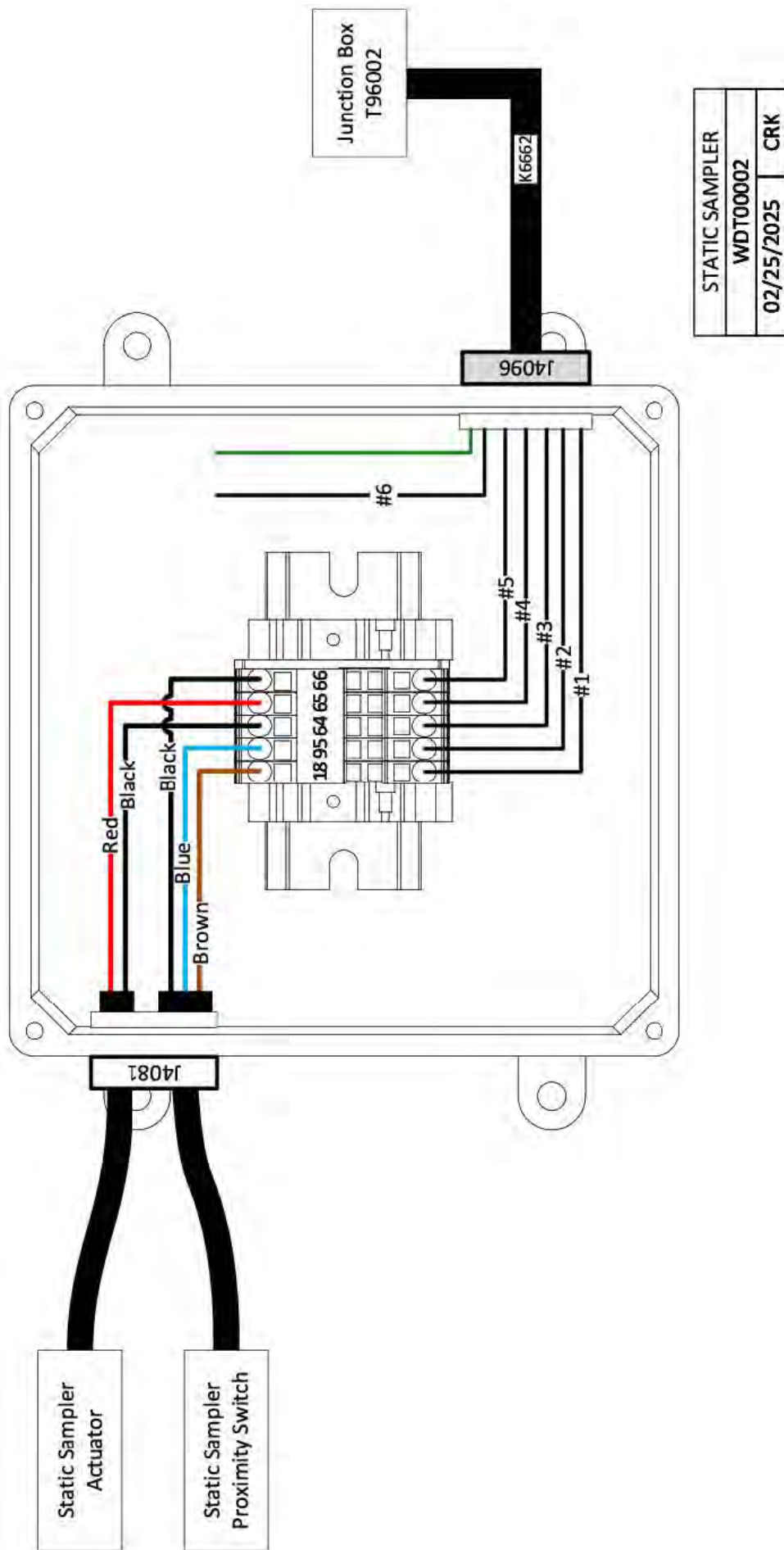


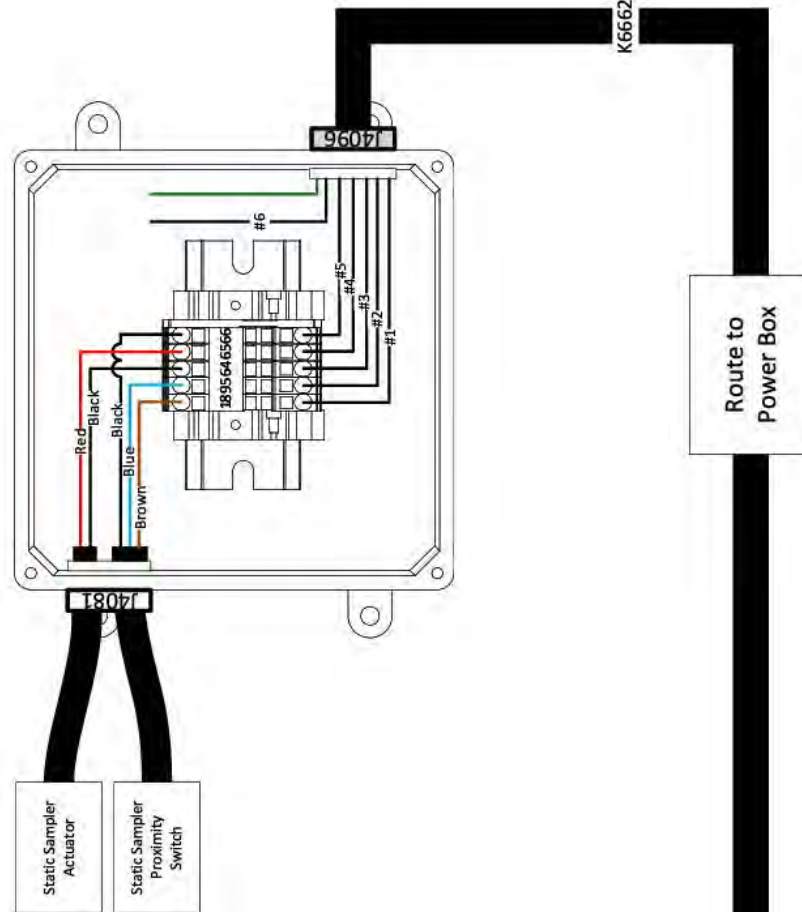
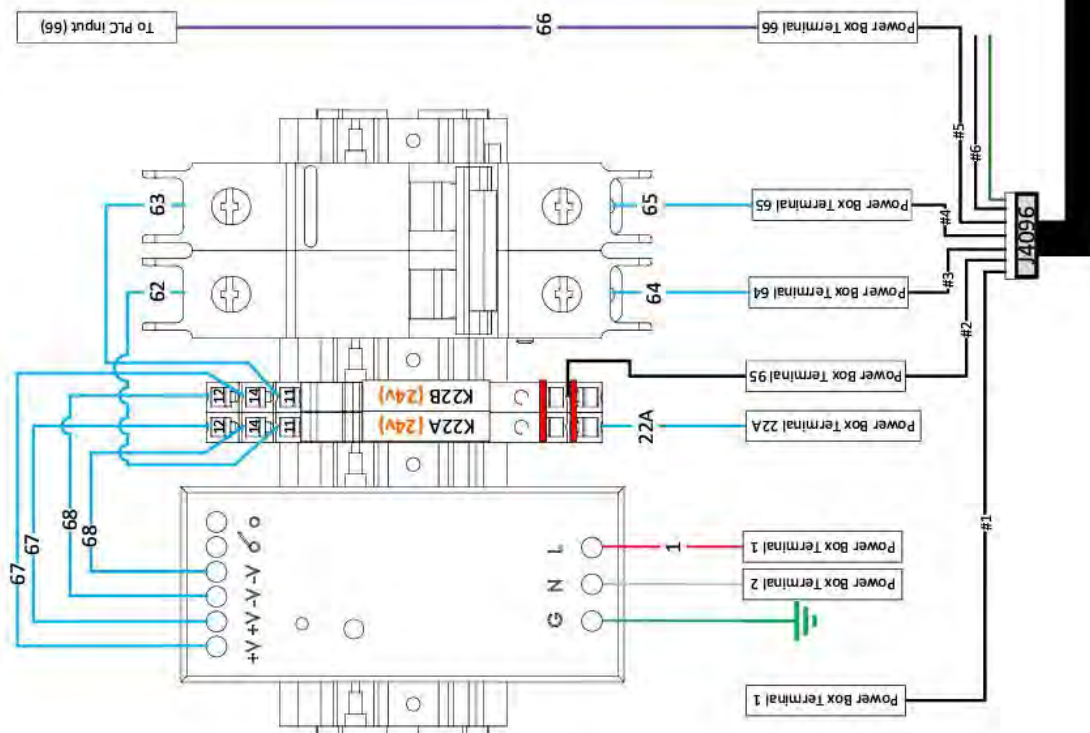


HEATER BOX NUMBERS: T96013, T96017, T960171	
NPPA86 HEATER BOX (CONTINUED)	
WDT00002	
02/25/2025	CRK

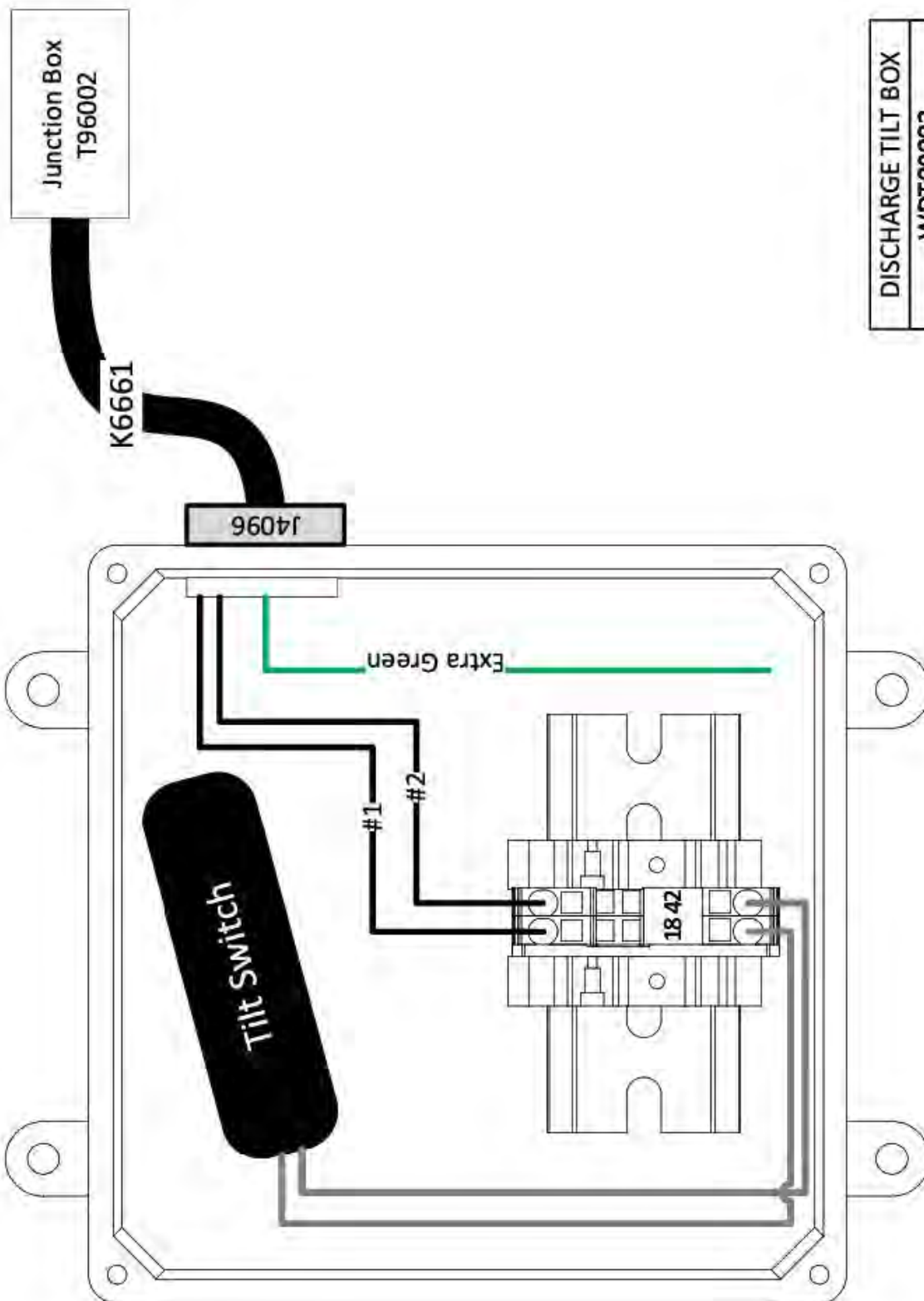


HEATER BOX NUMBERS: T96013, T96017, T960171	
NFPA86 HEATER BOX (CONTINUED)	
WDT00002	
02/25/2025	CRK





STATIC SAMPLER (CONTINUED)		
WDT00002		
02/25/2025	CRK	



Junction Box
T96002

K6661

J4096

Extra Green

Tilt Switch

#1

#2

18 42

DISCHARGE TILT BOX

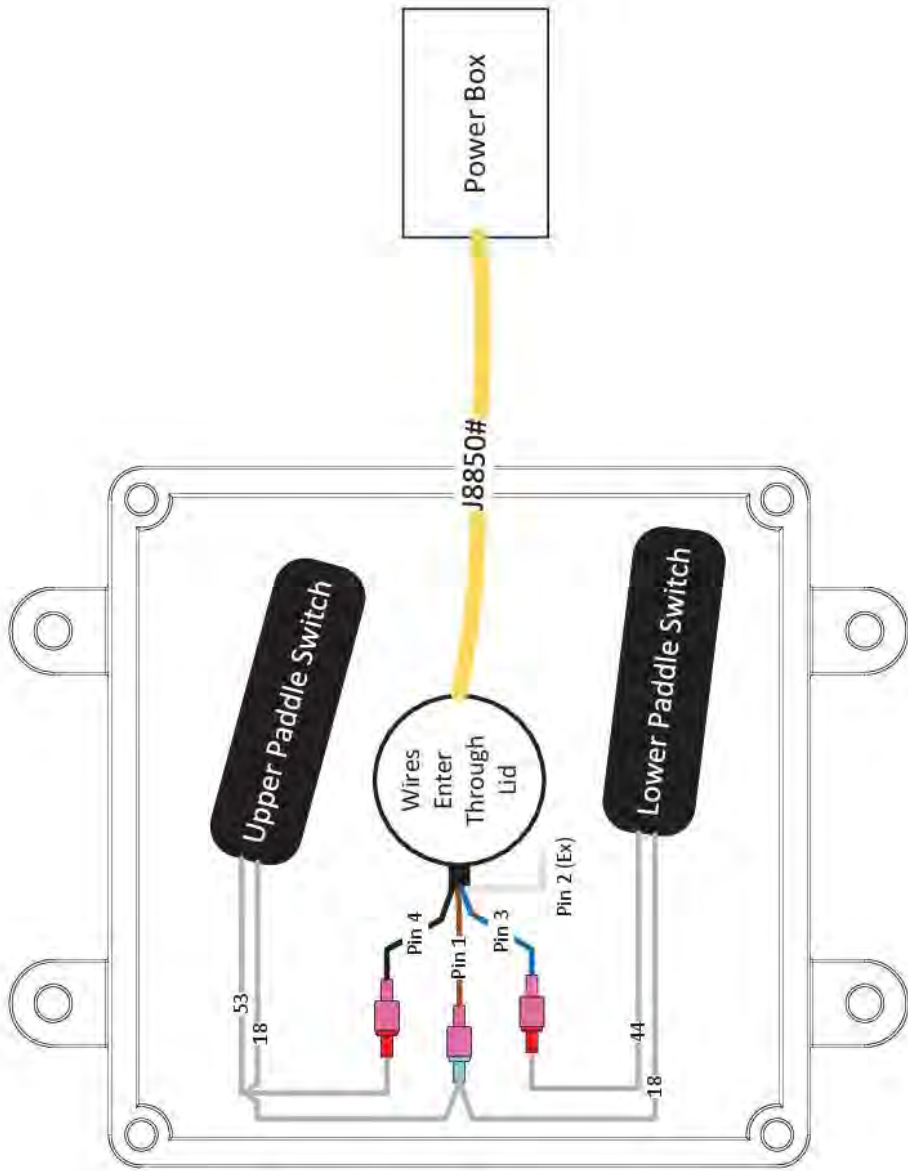
WDT00002

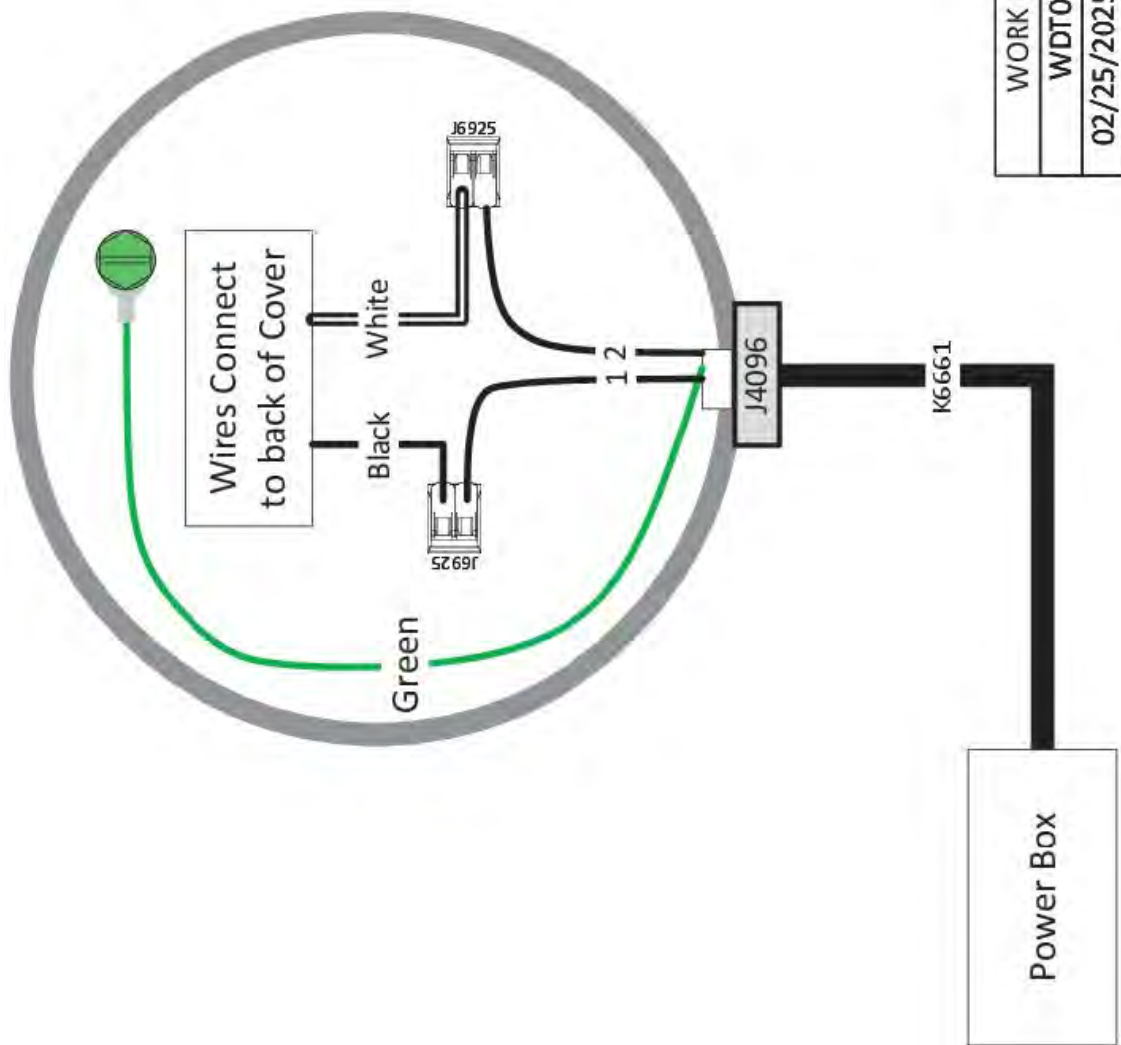
02/25/2025

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Paddle Fill Switch M12 Cable Lookup		
Model	Cable Part Numbers	Cable Length
TM1606+	J88505	20 M (65.6')
TM1608+	J88505	20 M (65.6')
TM1609+	J88506	25 M (82.0')
TM1610+	J88506	25 M (82.0')
TM1612+	J88506	25 M (82.0')
TM1613+	J88506	25 M (82.0')
TM1614	J88506	25 M (82.0')
TM1616	J88506	25 M (82.0')
TM1617	J88506	25 M (82.0')
TM2405+	J88505	20 M (65.6')
TM2406+	J88506	25 M (82.0')
TM2409+	J88506	25 M (82.0')
TM2410+	J88506	25 M (82.0')
TM2413	J88506	25 M (82.0')
TM2414+	J88507	30 M (98.4')
TM2418	J88507	30 M (98.4')
TM3206+	J88506	25 M (82.0')
TM3208+	J88506	25 M (82.0')
TM3209+	J88506	25 M (82.0')
TM3210+	J88506	25 M (82.0')
TM3212+	J88507	30 M (98.4')
TM3213+	J88507	30 M (98.4')
TM3214	J88507	30 M (98.4')
TM3216	J88507	30 M (98.4')
TM3217	J88507	30 M (98.4')

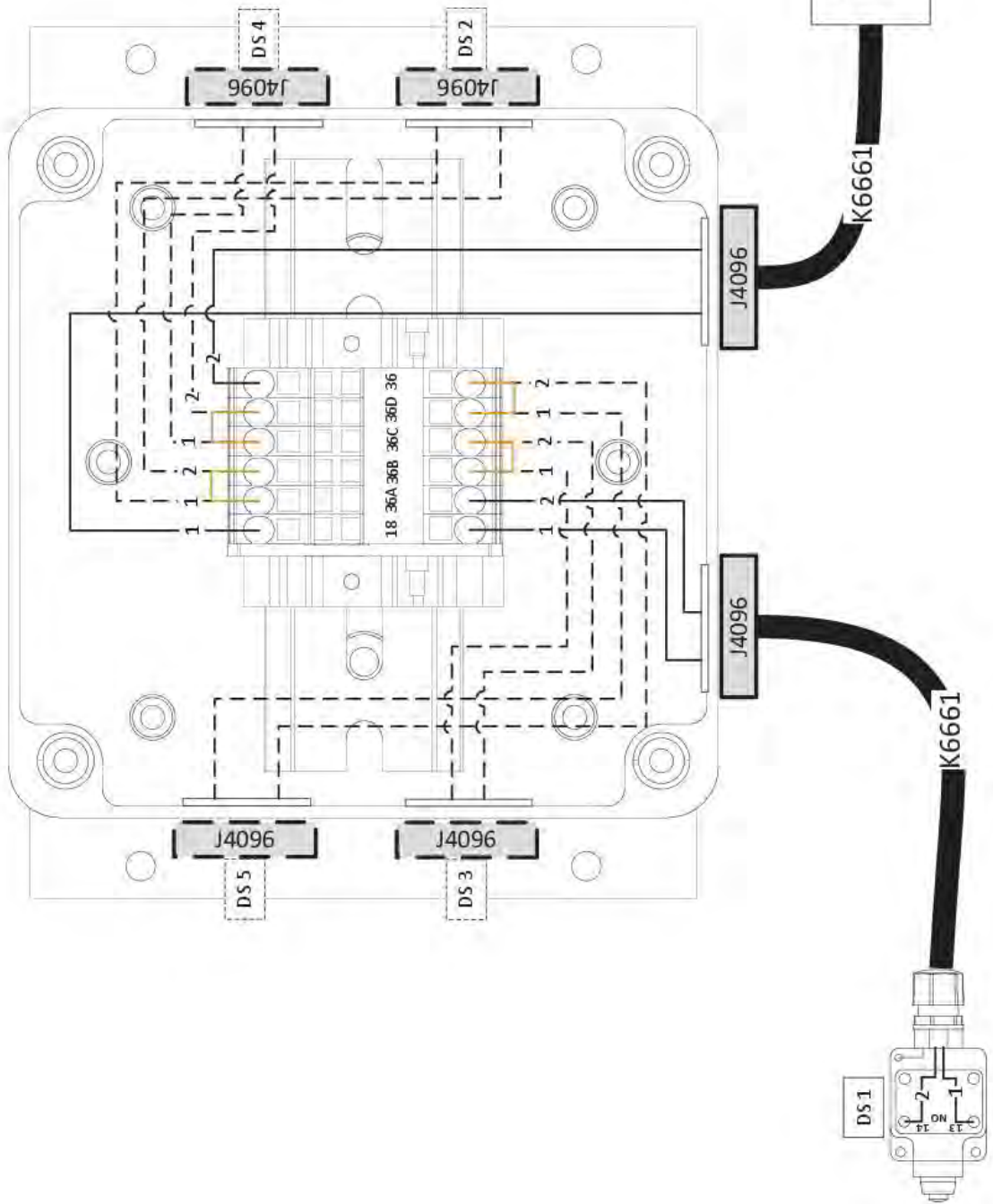
PADDLE FILL SWITCH
WDT00002
02/25/2025
CRK





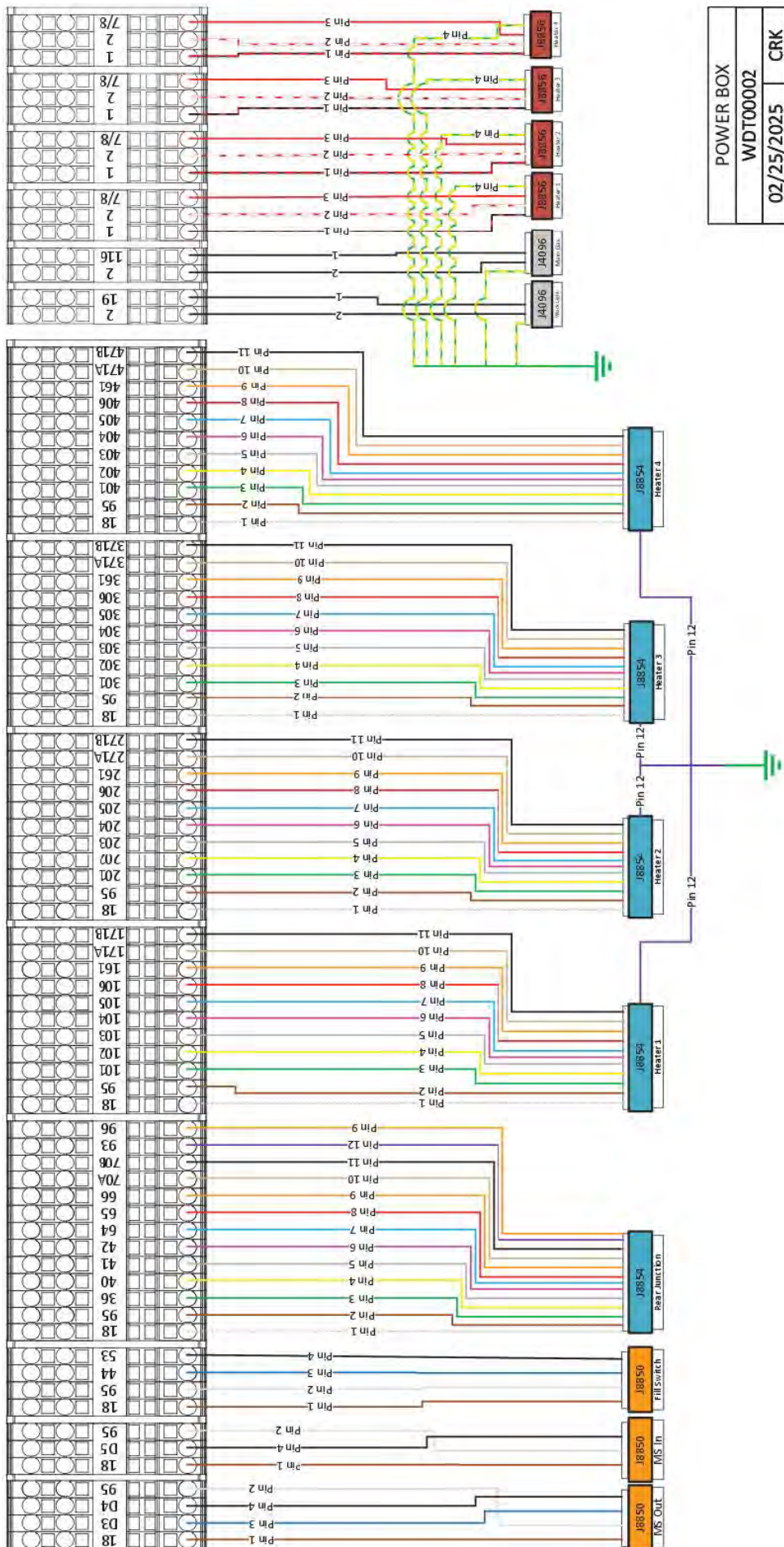
WORK LIGHT		
WDT00002		
02/25/2025	CRK	

Orange jumpers get pulled out and replaced with door switch wires



Dryer #	Plenums	Doors
TM1606	1	2
TM1608	Plenum	
TM1609		
TM1610	2	3
TM1612	Plenum	
TM1613		
TM1614	3	4
TM1616	Plenum	
TM1617		
TM2405	1	2
TM2406	Plenum	
TM2409	2	3
TM2410	Plenum	
TM2413	3	4
TM2414	Plenum	
TM2418	4 Plenum	5
TM3206	2	1
TM3208	Plenum	
TM3209		
TM3210	3	2
TM3212	Plenum	
TM3213		
TM3214	4	3
TM3216	Plenum	
TM3217		

DOOR SWITCH
WDT00002
02/25/2025
CRK



Tables below show M12 cable part numbers and usage. Colors in tables represent colors of M12 cables.

	DC 4 Pin Shielded		DC 12 Pin		AC 4 Pin	
Length	M12 to Wire	M12 to M12	M12 to Wire	M12 to M12	M12 to Wire	M12 to M12
2 M (6.5')	J88500	J88510	J88540	J88550	J88560	J88570
3 M (9.8')	J88501	J88511	J88541	J88551	J88561	J88571
5 M (16.4')	J88502	J88512	J88542	J88552	J88562	J88572
10 M (32.8')	J88503	J88513	J88543	J88553	J88563	J88573
15 M (49.2')	J88504	J88514	J88544	J88554	J88564	J88574
20 M (65.6')	J88505	J88515	J88545	J88555	J88565	J88575
25 M (82.0')	J88506	J88516	J88546	J88556	J88566	J88576
30 M (98.4')	J88507	J88517	J88547	J88557	J88567	J88577

Table 1- Sukup part numbers for Turck cables

	DC 4-PIN	DC 12-PIN	AC 4-PIN
FEMALE	J8850	J8854	J8856
MALE	J8851	J8855	J8857

Table 2 - Sukup part numbers for Turck bulkheads

CABLE	PINS	ENDS	LENGTH	PART #
Heater Box, AC	4	M12 - M12	Various	J8857#
Heater Box, DC	12	M12 - M12	Various	J8855#
Moisture Sensor (Shielded)	4	M12 - M12	Various	J8851#
Fill Switch	4	M12 - Wire	Various	J8850#
Right Rear Junction Box	12	M12 - Wire	Various	J8854#
Main Gas Solenoid	4	M12 - Wire	3 M	J88561

NOTE
 Depends on model – See Table 4
 Depends on model – See Table 4
 Depends on length, unload extension
 Depends on model – See Table 4
 10M: J88441; 15M & all others: J88442

Table 3 - M12 cable identification & usage

Model	Incoming Moisture Sensor	Fill Switch	Heater Box AC #1	Heater Box AC #2	Heater Box AC #3	Heater Box AC #4	Heater Box DC #1	Heater Box DC #2	Heater Box DC #3	Heater Box DC #4
TM1606	J88515	J88505	J88573	X	X	X	J88553	X	X	X
TM1608	J88515	J88505	J88573	X	X	X	J88553	X	X	X
TM1609	J88516	J88506	J88573	X	X	X	J88553	X	X	X
TM1610	J88516	J88506	J88573	J88574	X	X	J88553	J88554	X	X
TM1612	J88516	J88506	J88573	J88574	X	X	J88553	J88554	X	X
TM1613	J88516	J88506	J88573	J88574	X	X	J88553	J88554	X	X
TM1614	J88516	J88506	J88573	J88574	J88574	X	J88553	J88554	J88554	X
TM1616	J88516	J88506	J88573	J88574	J88575	X	J88553	J88554	J88555	X
TM1617	J88516	J88506	J88573	J88574	J88575	X	J88553	J88554	J88555	X
TM2405	J88515	J88505	J88573	X	X	X	J88553	X	X	X
TM2406	J88516	J88506	J88573	X	X	X	J88553	X	X	X
TM2409	J88516	J88506	J88573	J88574	X	X	J88553	J88554	X	X
TM2410	J88516	J88506	J88573	J88574	X	X	J88553	J88554	X	X
TM2413	J88516	J88506	J88573	J88574	J88574	X	J88553	J88554	J88554	X
TM2414	J88517	J88507	J88573	J88574	J88574	X	J88553	J88554	J88554	X
TM2418	J88517	J88507	J88573	J88574	J88574	J88575	J88553	J88554	J88554	J88555
TM3206	J88516	J88506	J88575	J88573	X	X	J88555	J88553	X	X
TM3208	J88516	J88506	J88575	J88573	X	X	J88555	J88553	X	X
TM3209	J88516	J88506	J88575	J88573	X	X	J88555	J88553	X	X
TM3210	J88516	J88506	J88575	J88573	J88574	X	J88555	J88553	J88554	X
TM3212	J88517	J88507	J88575	J88573	J88574	X	J88555	J88553	J88554	X
TM3213	J88517	J88507	J88575	J88573	J88574	X	J88555	J88553	J88554	X
TM3214	J88517	J88507	J88575	J88573	J88574	J88574	J88555	J88553	J88554	J88554
TM3216	J88517	J88507	J88575	J88573	J88574	J88575	J88555	J88553	J88554	J88555
TM3217	J88517	J88507	J88575	J88573	J88574	J88575	J88555	J88553	J88554	J88555

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Table 4 - Mixed-Flow Dryer height-dependent cables
 (Largest dryer expandability option shown)

See notes below on locations of components on common special-order dryers.

Front-Unload Portable & 16' & 24' Mixed-Flow Dryer:

If dryer unloads from front, junction box T96002 and both column over-temp switch boxes (T96004 & T96005) will be on front of dryer, and an extended door switch cable will go to door switch box T96006 on rear of dryer.

32' Mixed-Flows – Rear discharge:

As shown on Page 4, an additional T96003 junction box is used to connect column over-temp switches in series. M12 cable will terminate in T96003 junction box on front and a wire harness will run through solid conduit to T96002 junction box at rear of dryer.

32' Mixed-Flows – Front discharge:

If dryer unloads from front, junction box T96002 and column over-temp boxes T96004 and T96005 will be on front of dryer. An M12 cable will run from main power box to T96003 at rear and a wire harness will run through solid conduit to T96002 junction box at rear of dryer. Door switch cable will run from T96002 box to T96006.

Auger Unload Static Sampler:

If a static sample box is used on dryer with an unload auger, sample box will be wired directly into main power box using K6662 cable and cable gland J4096.