



FlexLink®

Power box

5058140

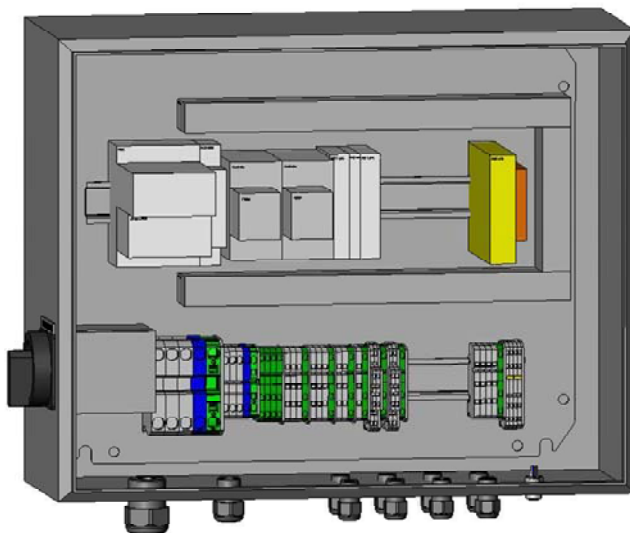
User documentation ver 1.0

Power box

Views



Exterior view



Interior view



Bottom view

Power box

Electrical supply

Voltage	400 VAC
Phases	3
Frequency	50 Hz
Current	25 A maximum

Voltage	24 VDC
Current	4 A maximum

Short-circuit capacity	10 kA
Electrical diagram	5058140-01

Physical dimension

Height	400 mm (enclosure) + 50 mm (glands)
Width	500 mm (enclosure) + 35 mm (switch)
Depth	210 mm (enclosure)

Weight	20 kg
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Distance between wall fixing holes = 495 mm (vertically and horizontally).

Power box

Features

Incoming power

- Large terminals for incoming 400V power supply (16 mm²)

System power supply

- Power bus: 400V/16A, 3Ph+N+ PE (4mm²)
 - Advanced circuit breaker for long distance bus
 - Lockable maintenance switch
- Incoming 24VDC power supply divided in two terminal groups of 4 A: 24V safe and 24V permanent

Communication

- Terminal group for hardwired communication for controlling and supervising safety system
- M12-connector for optional Reset Maneuver box

Safety

- One safety group: safety relay/double contactors disconnecting Power bus and 24VDC safe power supply
- Relay providing safe stop triggered by software

Power box

Interfaces

Power supply connection

V_{AC} power supply

Rated cable area connection: 16 mm²

Terminal group X301-1 connections:

Europe: L1/L2/L3 + N + PE

US: L1/L2/L3 + PE

24V_{DC} power supply

Rated cable area connection: 2.5 mm²

Terminal groups X301-3 connections:

210L+: +24 V_{DC} Safe (safety protected)

211L+: +24 V_{DC} (Permanent)

200L- : 0 V_{DC}

PE

Safety relay connections

Safety input

Rated cable area connection: 2.5 mm²

Terminal group: X330-2

9: Safety input

PE

Safety outputs

Rated cable area connection: 2.5 mm²

Terminal group X330-1 connections:

7: Safety output 1

8: Safety output 2

200L-: 0 V_{DC}

PE

Safety loop

Rated cable area connection: 1.5 mm²

Terminal group X340-1 connections:

3: Channel 1 out

4: Channel 2 out

5: Channel 1 in

6: Channel 2 in

PE

Safe stop CMD

Rated cable area connection: 1.5 mm²

Terminal group X340-2 connections:

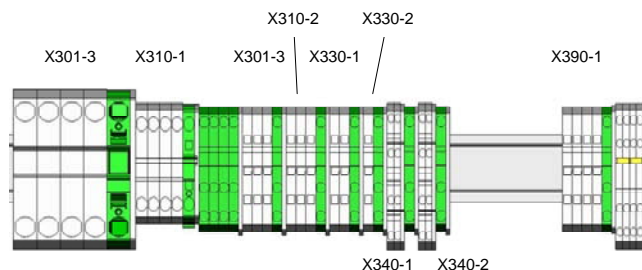
1: Channel 1 in

2: Channel 2 in

3: Channel 1 out

4: Channel 2 out

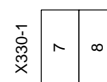
PE



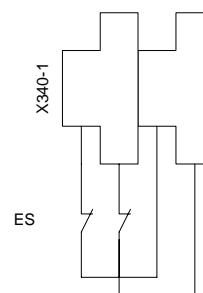
Terminal groups



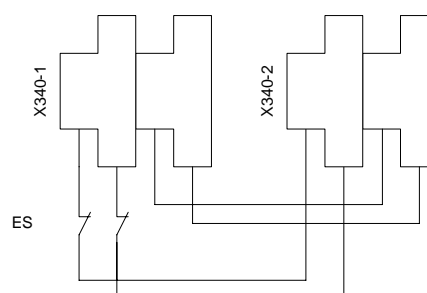
Safety input



Application: Powering air supply valve



Safety loop



Safety loop with remote safe stop functionality

Power box

Control box communication

Fieldbus interface communication

Cross-section: Max. 2.5 mm² (with/without ferrule)

Terminal group X390-1 connections:

- 1: Safety reset (signal to Power box)
 - 2: Safety OK (signal from Power box)
 - 3: No MCB tripped
 - 4: Safe stop CMD (signal to Power box)
- PE

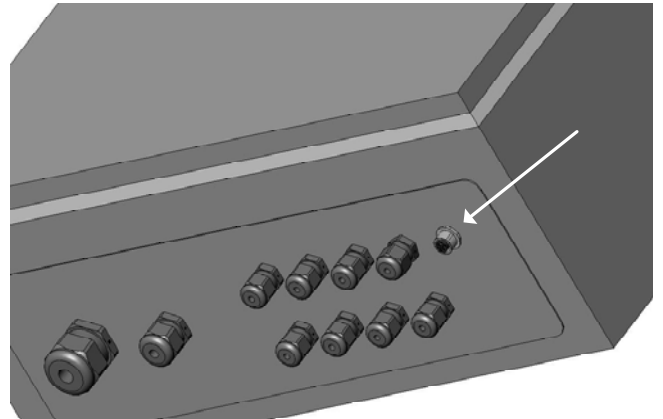
Maneuver box communication

Maneuver unit connections

Connector: M12, 4-pin, male, A-code

Connector X391-1 connections:

- Pin 1: +24 VDC
- Pin 2: Safety OK indication
- Pin 3: 0 VDC
- Pin 4: Reset pushbutton



Maneuver box communication interface

Spare parts list

Product: 5058140-01

Standard name	Des.	Manufacturer	Type	Order number	FlexLink ID
Main switch	Q301-1	Moeller		048365	5057526
Neutral pole		Moeller		000651	5057258
Circuit breaker	Q310-1	Moeller		026606	5059711
Trip block		Moeller		059828	5059712
Auxiliary contacts		Moeller		093050	5059713
Miniature circuit breaker	Q310-2	Moeller		278553	5057277
Auxiliary contacts		Moeller		286054	5110013
Miniature circuit breaker	Q310-3	Moeller		278553	5057277
Safety relay	A330-1	Pilz		PNOZ e1.1p	5059678
Contactor	K330-1	Moeller		277050	5110021
Auxiliary contacts		Moeller		276422	5110022
Contactor	K330-2	Moeller		277050	5110021
Auxiliary contacts		Moeller		276422	5110022
Relay	K440-1	Weimüller		7940006157	5110086

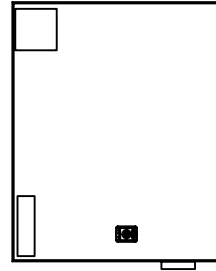
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101	2007-06-07	13:30:23	101	Exterior
102	2007-06-07	13:30:28	102	Interior
111	2007-06-07	13:30:37	111	Internal, Exterior
112	2007-06-07	13:30:44	112	Internal, Interior
113	2007-06-07	13:30:52	113	Internal, Assembly plate
114	2007-06-07	13:31:05	114	Internal, Assy plate prep
115	2007-06-07	13:31:16	115	Internal, Making of holes
116	2007-06-07	13:31:23	116	Internal, Earthing
117	2007-06-07	13:31:31	117	Internal, Gland plate
120	2007-06-07	13:33:33	120	Internal, Terminal groups
301	2007-06-07	13:31:50	301	Incoming power supply
302	2007-06-07	13:33:29	302	Enclosure earthing
310	2007-06-07	13:32:06	310	Power bus
330	2007-06-07	13:32:12	330	Safety relay
340	2007-06-07	13:32:20	340	Safety loop
385	2007-06-07	13:32:27	385	MCB loop
390	2007-06-07	13:32:33	390	Fieldbus communication
391	2007-06-07	13:32:41	391	Maneuver communication

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			Project number 7220367					
			By	Date		Power box		
			Drawn			List of sheets		
			Check			Function	Location	
Rev.	Date	Change	By					
			5058140-01			Sheets	019	Sheet 100



10. A330-1
11. K330-1
12. K330-2
13. X330-1
14. X340-1
15. X340-2
16. X330-2

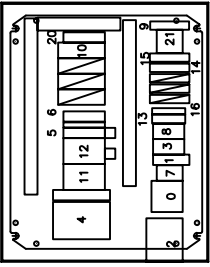
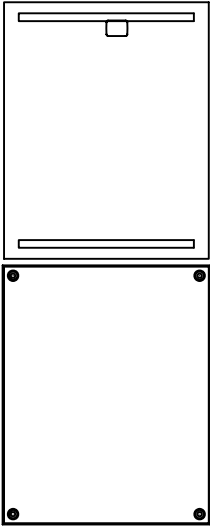
10. A330-1
11. K330-1
12. K330-2
13. X330-1
14. X340-1
15. X340-2
16. X330-2

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00. X301-1
01. X301-2
02. Q301-1
03. X301-3
04. Q310-1
05. Q310-2
06. Q310-3
07. X310-1
08. X310-2
09. X310-3

10. A330-1
11. K330-1
12. K330-2
13. X330-1
14. X340-1
15. X340-2
16. X330-2

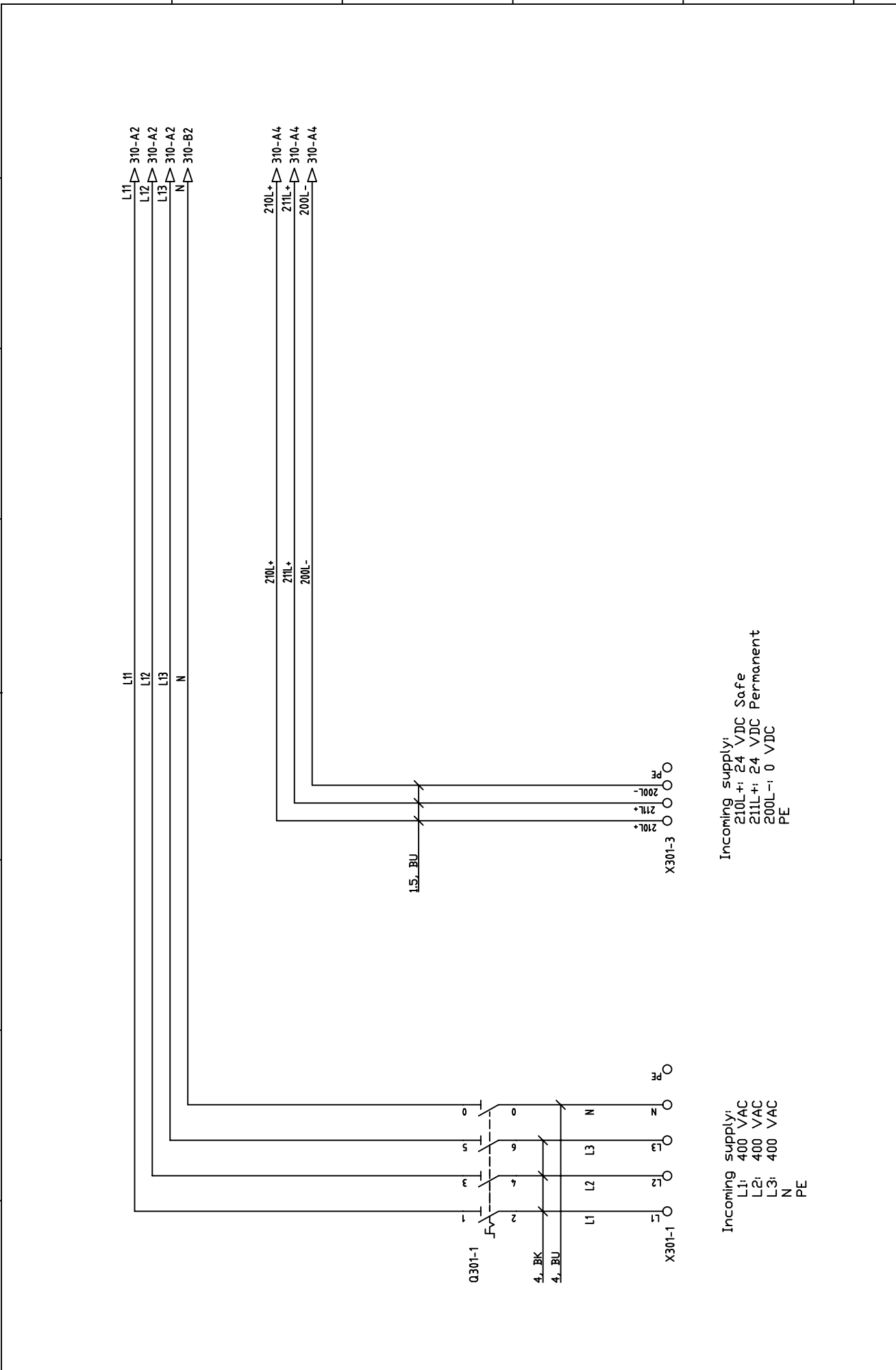
20. K390-1
21. X390-1
22. X391-1

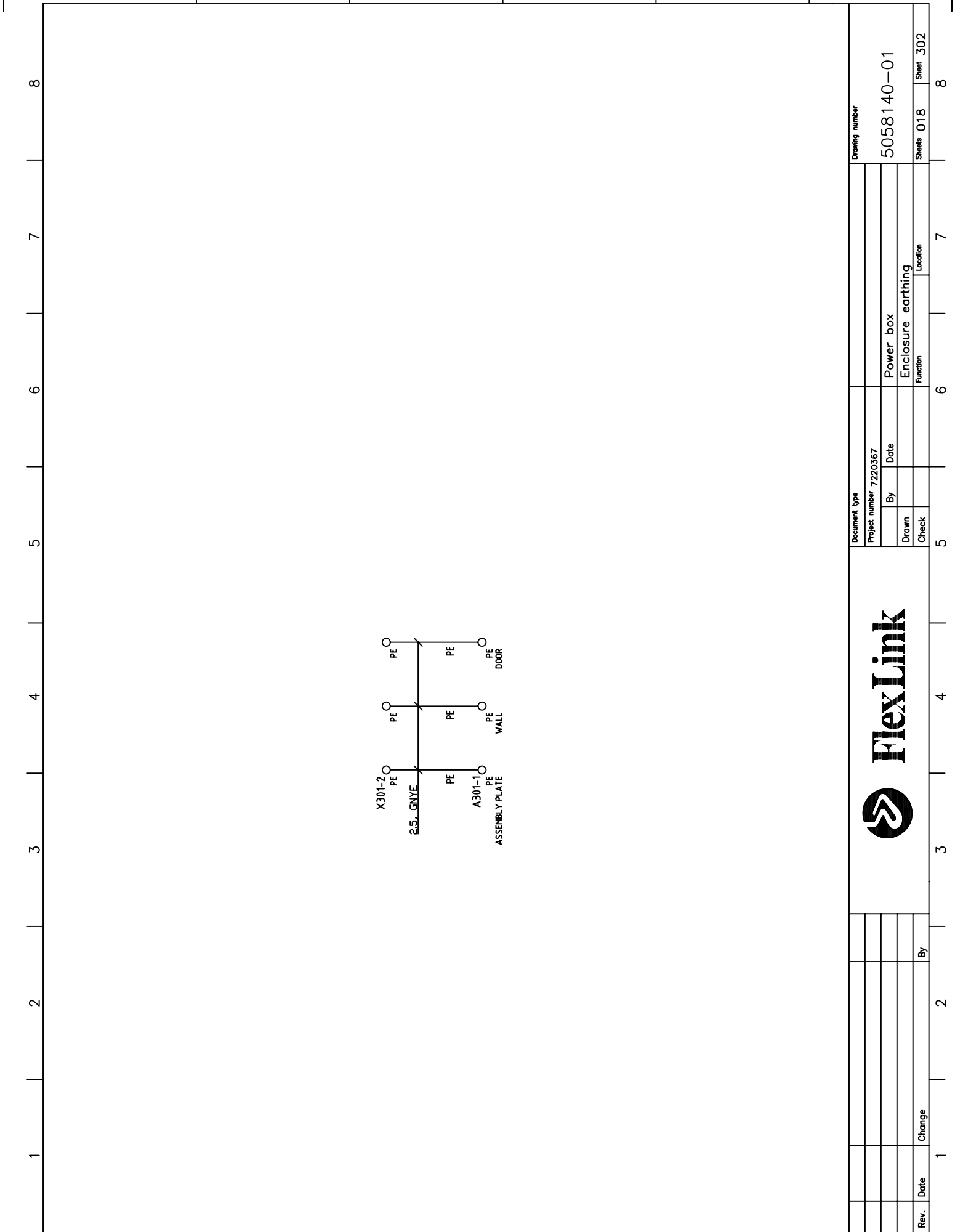


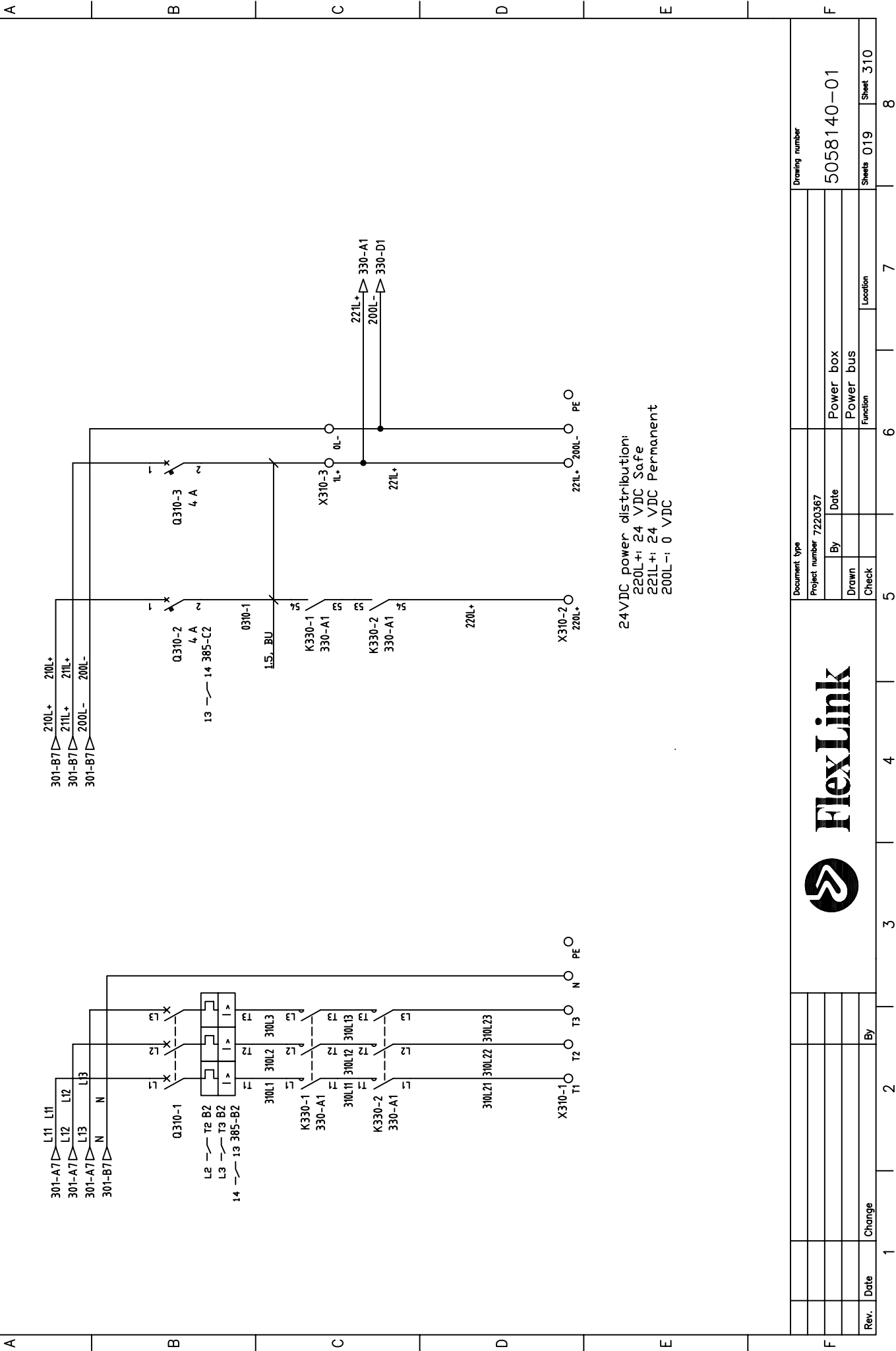
Assembly plate



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				Sheets 019		
				Sheet 102		

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24VDC power distribution:
220L+/- 24 VDC Safe
221L+/- 24 VDC Permanent
220L-/- 0 VDC

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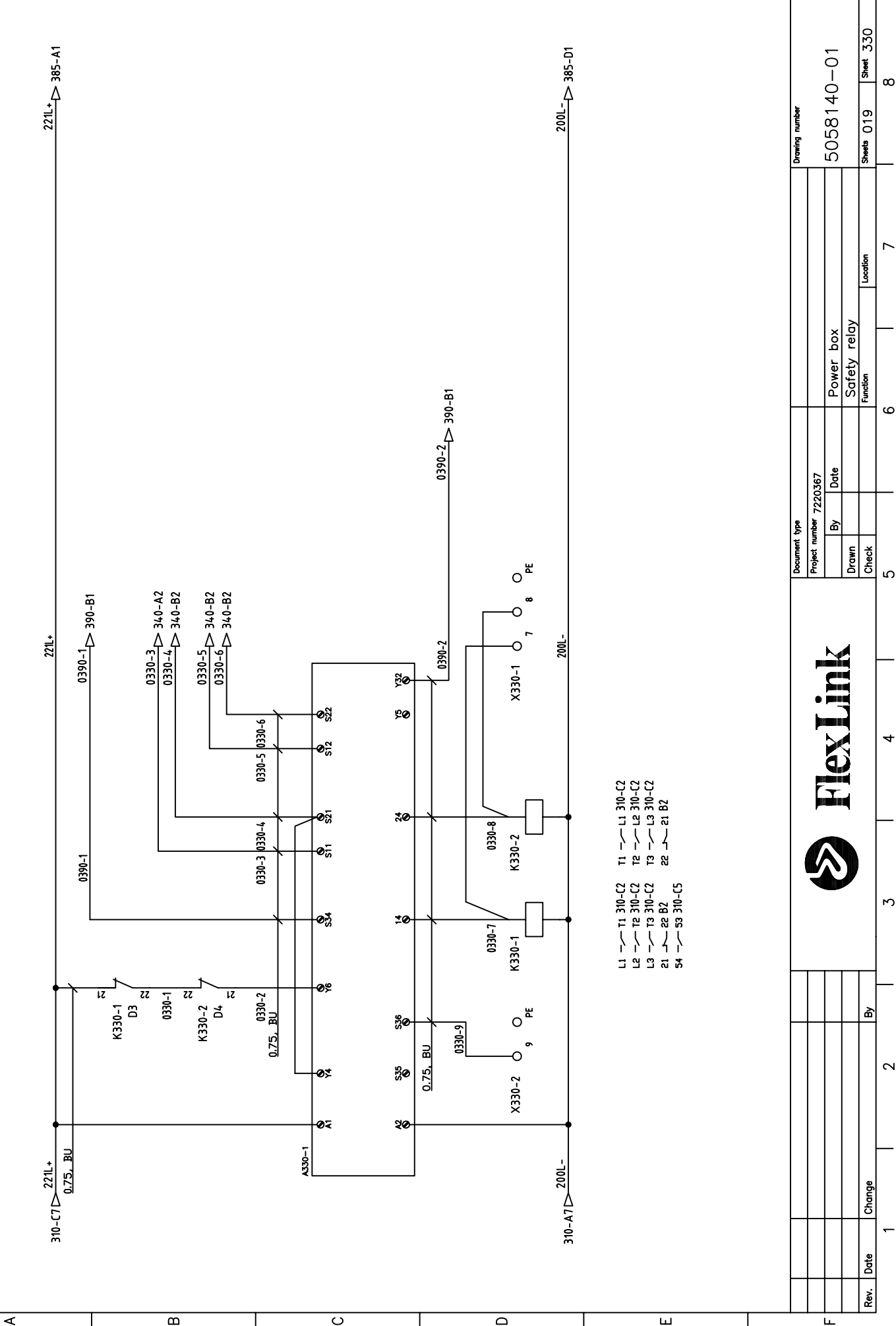
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24VDC power distribution:
220L+/- 24 VDC Safe
221L+/- 24 VDC Permanent
220L-/- 0 VDC

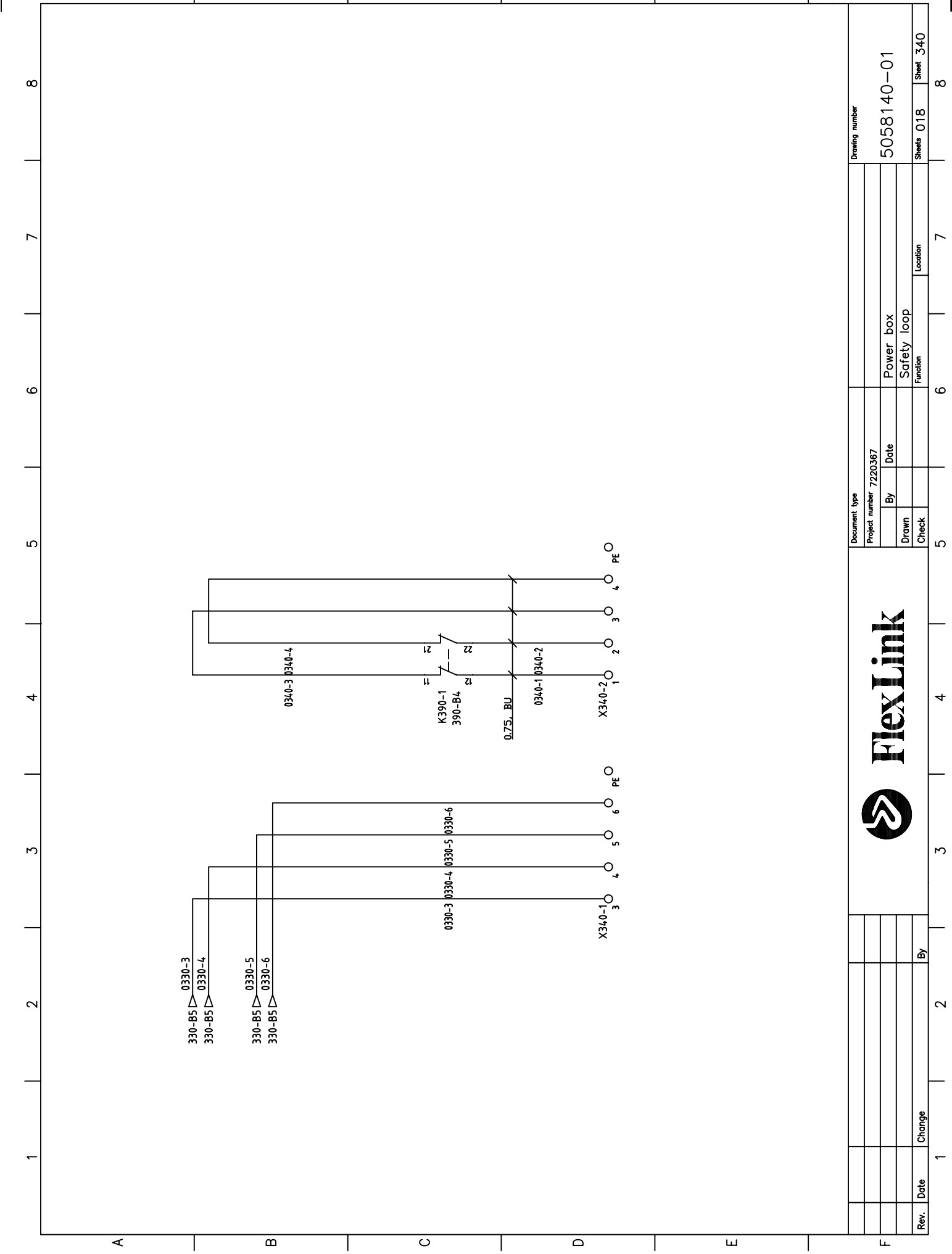
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Sheets	019	Sheet	310



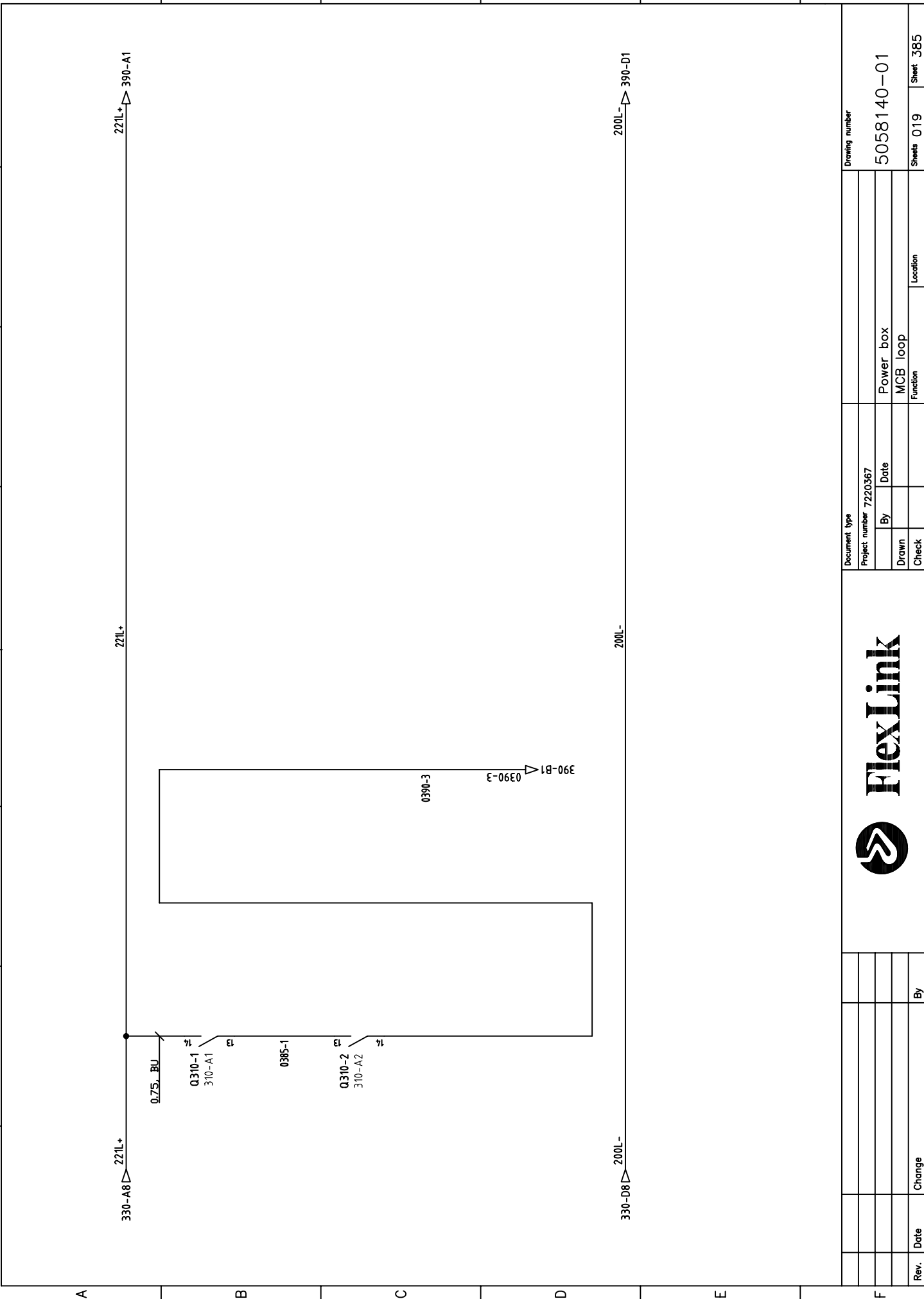
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The diagram illustrates the electrical wiring for a power box and a safety loop. The power box is connected to the safety loop through a switch (K390-1). The safety loop is connected to the power supply (K390-1) through a switch (K390-1). The diagram includes labels for components, terminals, and connection points.

Components and Labels:

- Power Box:** 0330-3, 0330-4, 0330-5, 0330-6
- Safety Loop:** 0340-1, 0340-2, 0340-3, 0340-4
- Switch:** K390-1, 390-B4
- Power Supply:** K390-1
- Terminals:** X340-1, X340-2, X340-3, X340-4, X340-5, X340-6
- Connection Points:** 0.75, BU



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Drawn										Check		MCB loop			
Rev.										Date		Change			
By										Location		Sheets 019		Sheet 385	

