

Electrical Documentation

Everything you need to know about Electrical Documentation for the upcoming FRC season!

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Documentation Standard

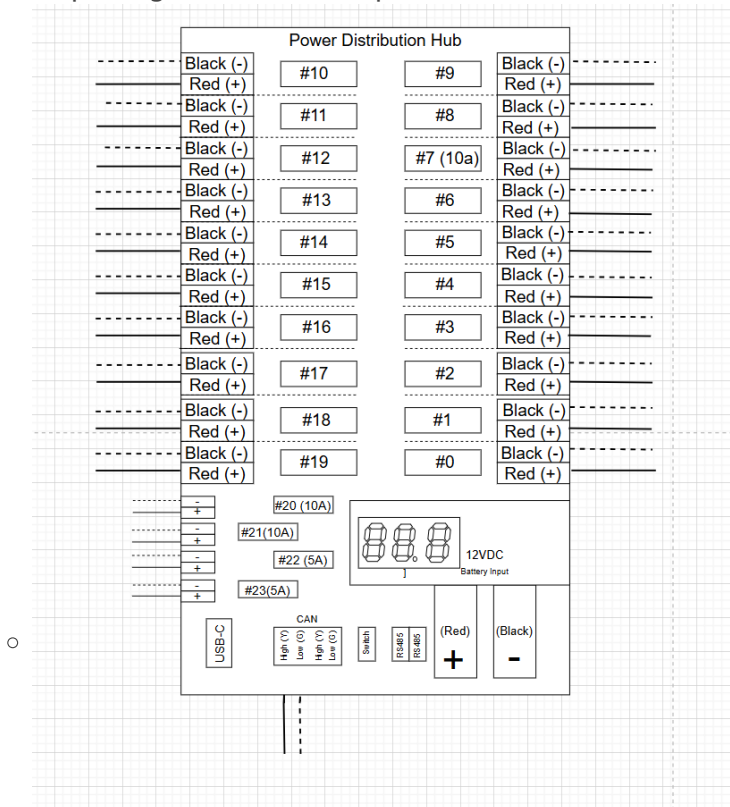
As a representative assembly, the Electrical Subteam has decided to use draw.io as the Electrical Standard for the FRC 2026 season, *Rebulit*.

We will be using this website for our documentation on Electrical Schematics and Layouts.

Quick Distinction:

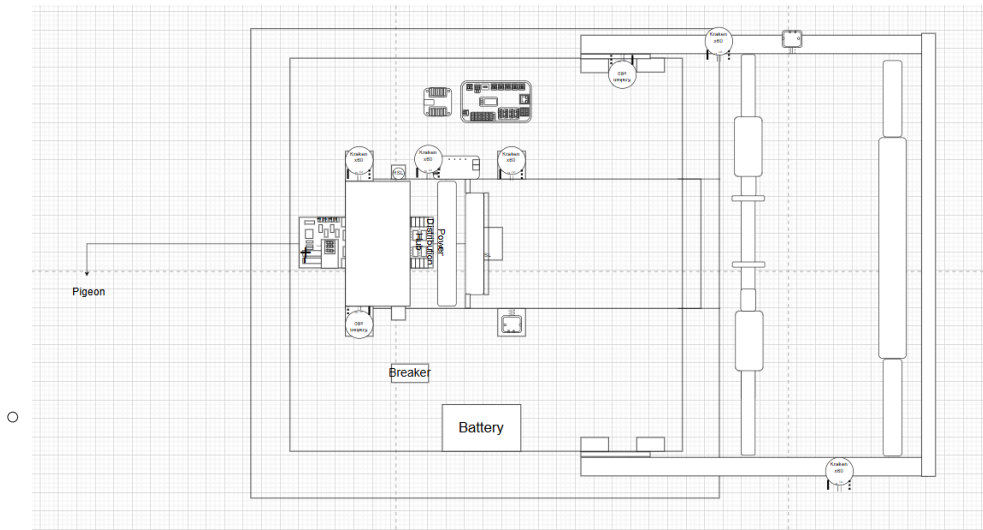
Electrical Schematics (in our terms)

- Component diagrams that depict the connections of ports and the port numbers that they connect to
 - Depicting motors and what PDH port they connect to
 - Showing the flow of the CANchain through the various components
 - Depicting the individual ports of the PDH and their connections



Electrical Layouts

- Diagram of the robot and the various components connected. This also entails the display of wiring between these components on the robot



○ Does not include wiring, but you get the point ^

Electrical Template for Documentation

<https://drive.google.com/file/d/1hX2cgcBHF-MwaM-B19c196EsSkeuA8Ys/view?usp=sharing>

NOTES

When using this template:

- Be sure that you are following FRC Electrical Standards
- Be prepared to have your Electrical Schematics reviewed by the team
- Make sure it is thorough and realistic
- Understand that each section has inputs based on the specificities of robot

Resources for Draw.io

Video tutorials on draw.io

<https://drawio-app.com/tutorials/video-tutorials/>

<https://www.youtube.com/channel/UCiTrN9b8P4CoSfpkfgEJHA>

<https://www.youtube.com/watch?v=bN6i6dsoZTs>

<https://www.youtube.com/watch?v=WICKv49Pkvg>

Example Documentation from Other Teams

<https://github.com/sikaxn/FRC-Custom-CAN-Sensor/wiki/6.-Wiring-and-powering>

Diagram	Type	Use	CAN ID
	RoboRIO2	--	--
	Pigeon	IMU	--
Branch for Swerve			
	Kraken X44	SteerFL	--
	CANcoder	EncoderFL	--
	Kraken X60	Drive FL	--
Loop to Elevator			
	Cable Chain		
	Throughbore Encoder	EncoderWrist	--
	(Spacer 1.67x)		
	Kraken X60	Wrist	--
Branch through wrist			
	(Spacer 0.33x)	or or	
	Slip Ring / Mystery Box		
	(Spacer 1x)		
	Kraken X44	Gripper	--
Branch for removable simple mechanism			
	Falcon 500	Climb	--
Branch for removable simple mechanism			
	Falcon 500		--
	Ferrule / CANderson adapter or extension		
	Kraken X44		--
Branch for mechanism in the base			
	Kraken X44	Intake	--
	PDH / PDP or 120Ω Termination		--

[https://www.team5026.com/Sprintbot_\(2025\)#CAN_Chain_&_Devices](https://www.team5026.com/Sprintbot_(2025)#CAN_Chain_&_Devices)

