

### The Team



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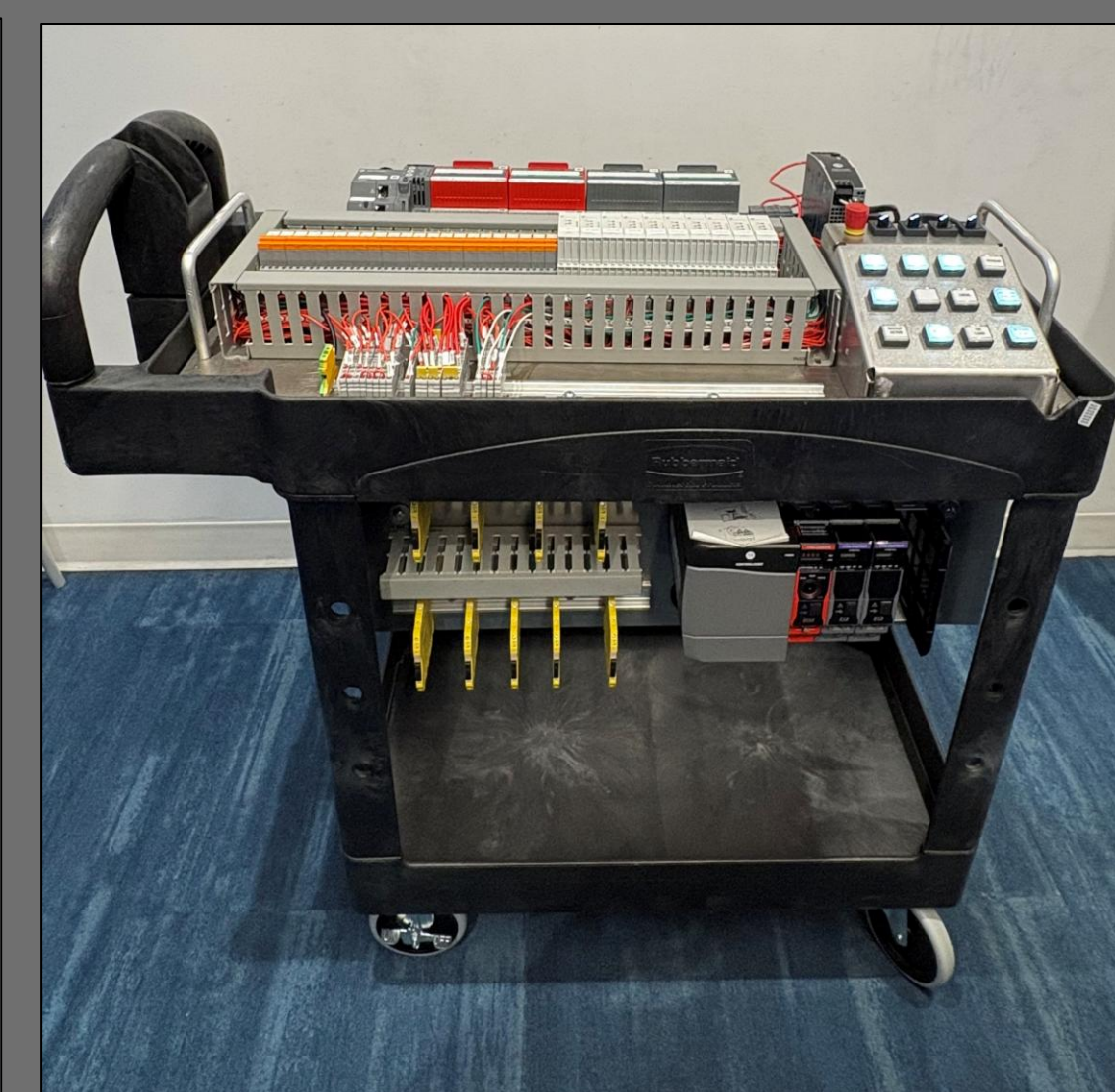
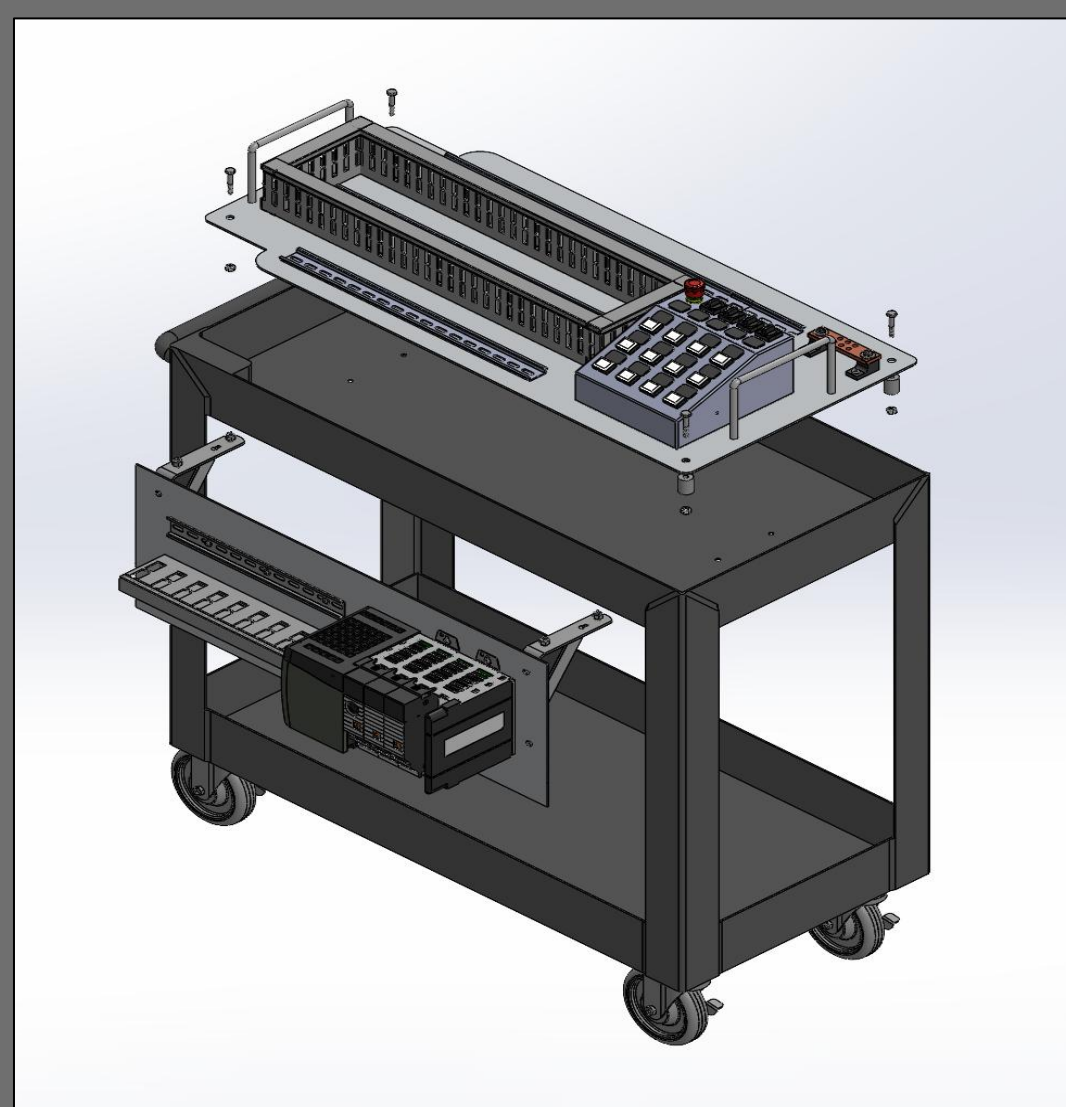
### Meet the Sponsor

Solar Turbines is a global leader in providing energy solutions. The company manufactures and packages industrial gas turbines, compressors, generator sets, and energy storage systems. These products support both the power generations and gas & oil markets

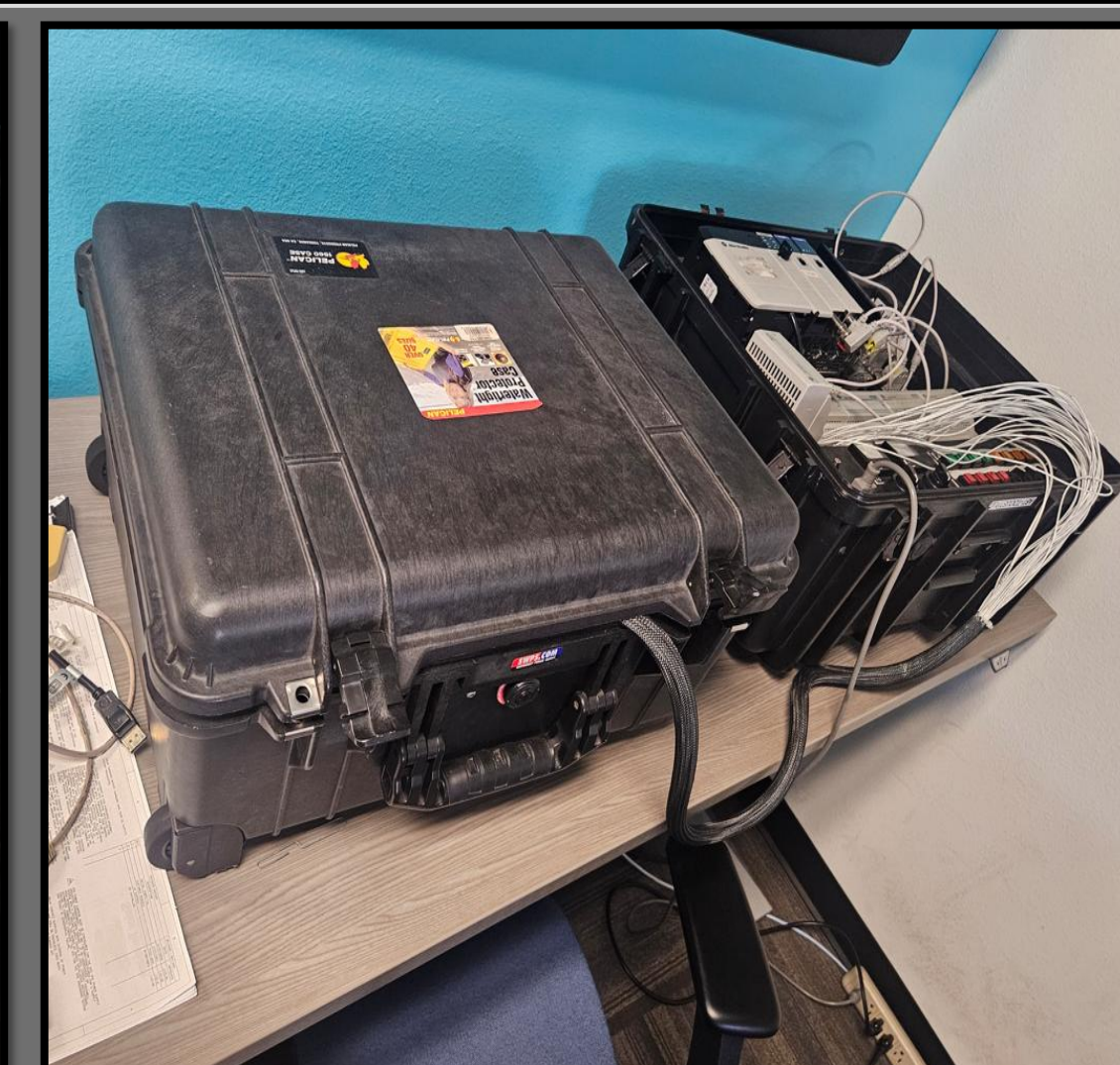
### Project Description

Solar Turbines uses standardized safety control systems to protect against potential hazards. These include a PLC-based control system and a backup relay system that work together to bring equipment to a safe position. Hands-on training is done using a simulator bench platform. The existing bench does not match the latest safety control system hardware, which makes training less effective. Therefore, the platform needs to be improved to match the current technology.

### CAD to Final Build



### Previous Simulator



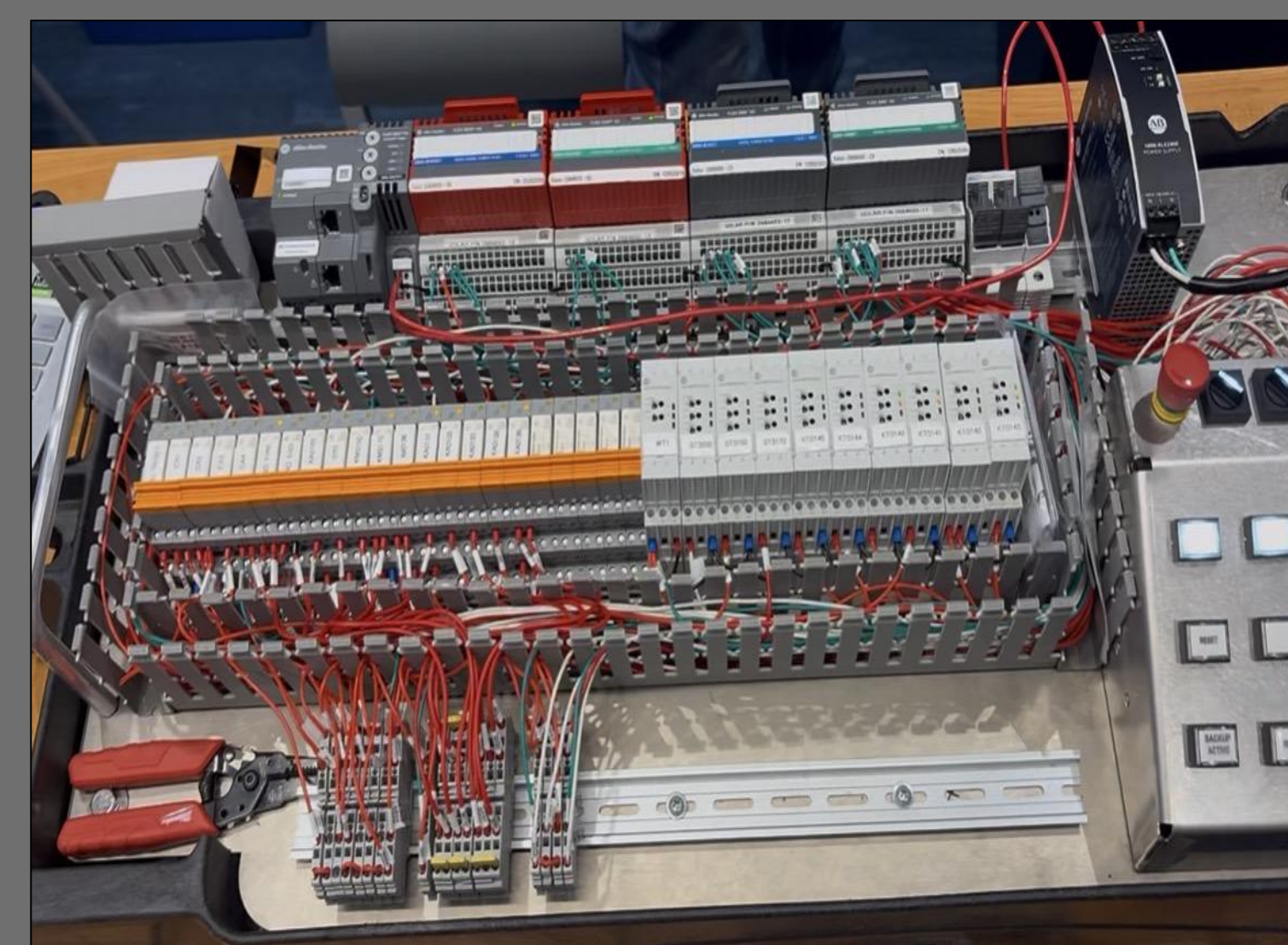
### Manufacturing & Assembly



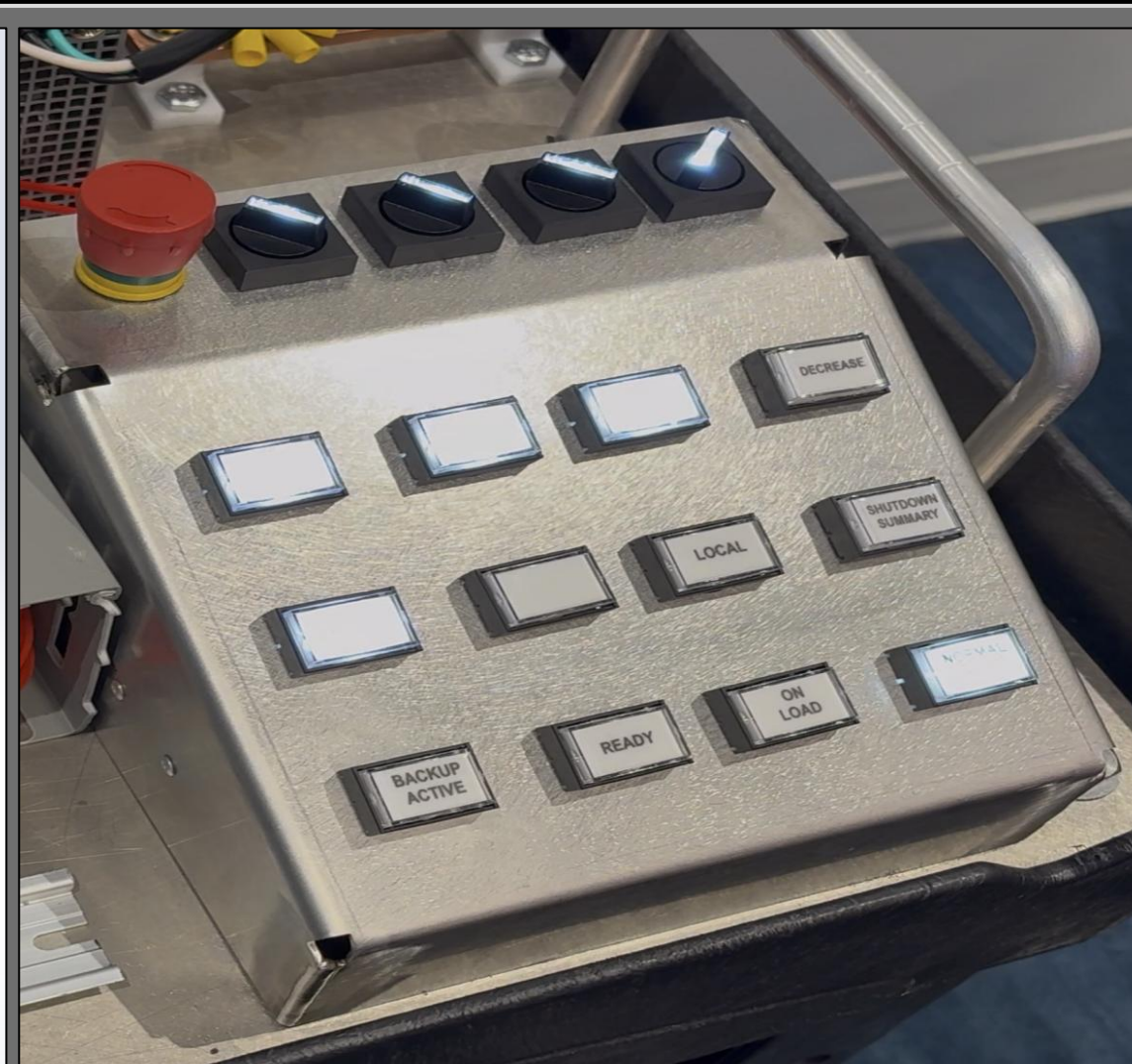
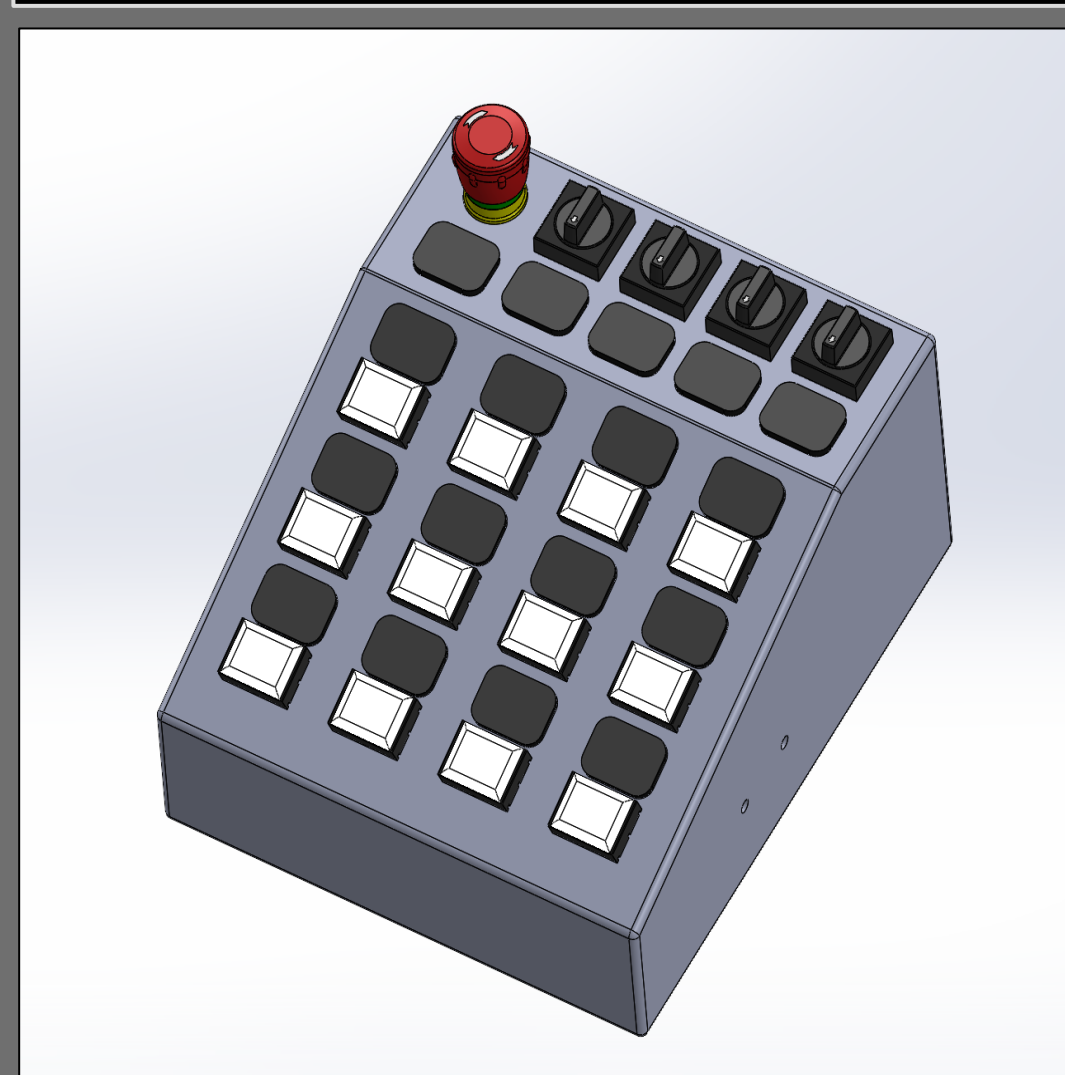
### Wiring Termination



Relay	A1	A2
Backup System R	System Reset Buttor	GND
CA 1 (Main Powe	Backup System Res	GND
CA 2 (No ESD Lo	Backup System Res	GND
CA 3 (AC PrePos	Backup System Res	GND
CA 4 (BU Lube L	Backup System Res	GND
No Fire	Fire Detected Switch	GND
No ESD	ESD Button (NC 1)	GND
KA2120 (Shutoff	SV_Relay (Safety O	GND
SR2 (Starter Dro	Starter_Dropout (Sta	GND
KM3150 (AC PMF	KA0135 (NC 12)	GND
KM3170 (DC BU	KA0136 BU lube PM	GND
ka0136 (LO HDR	PS3200 Switch (NO	GND
KA0137 Lube Inhi	KT0145 (NO 18), KT	GND
KA0135 AC PreP	CA 3 (NC 12), CA 3	GND
KA0133 Post Lub	Post Lube (STD Out)	GND
KA0138 BU Com	M3170 (STD Outout	GND
KA0136 (BU Lube	CA 4 (NC 12), CA 4	GND



### Human Machine Interface Box



### Acknowledgments

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