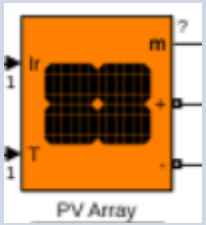
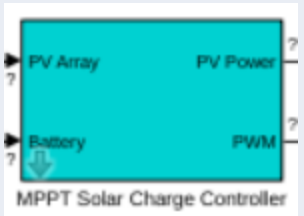
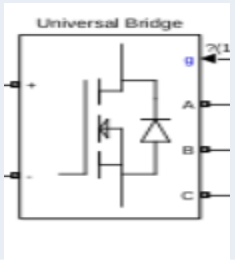
Team Astra

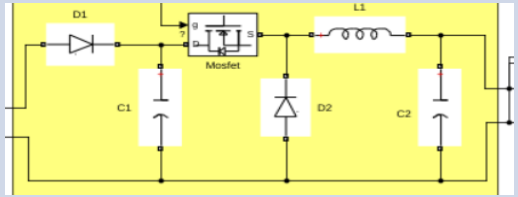
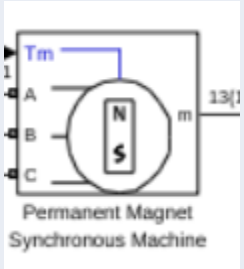
Sri Krishna College of Engineering and Technology

CFD Report

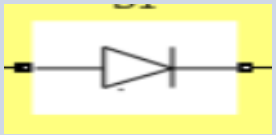
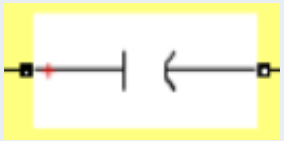
Components

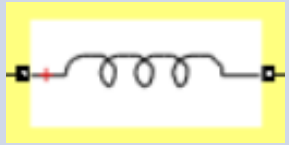
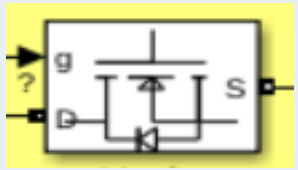
S.No	Name of the Components	Images
1	**PV ARRAY**	
2	**MPPT SOLAR CHARGE CONTROLLER**	

S.No	Name of the Components	Images
3	**BATTERY**	
4	**UNIVERSAL BRIDGE - INVERTER**	

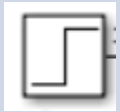
S.No	Name of the Components	Images
5	**DC to DC CONVERTER**	
6	**PERMANENT MAGNET SYNCHRONOUS MACHINE (MOTOR)**	

Symbols

S.No	Name of the Symbol	Images
1	DIODE	
2	CAPACITOR	

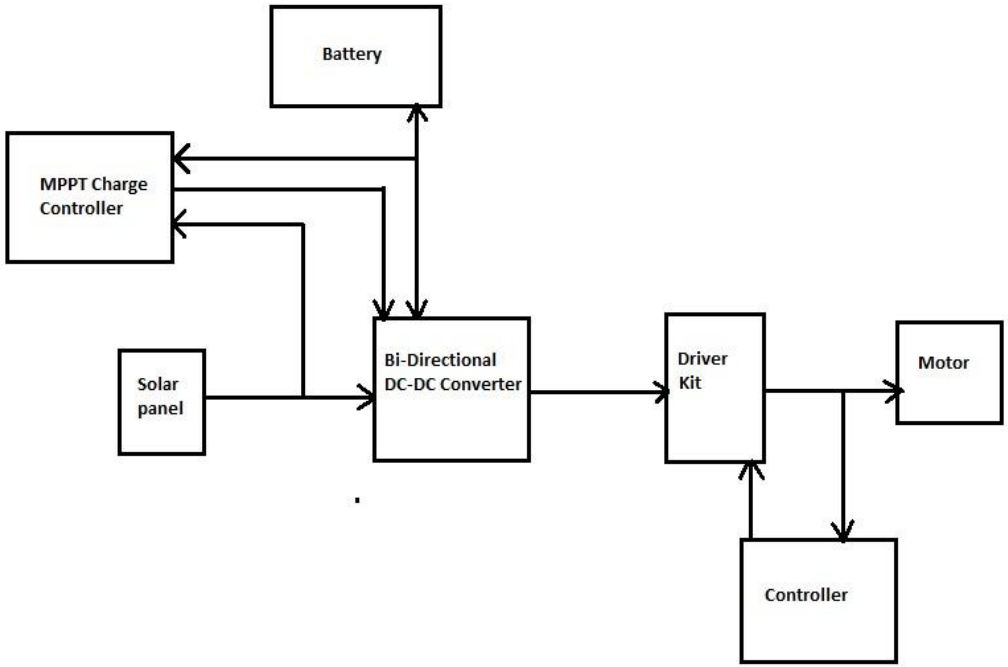
S.No	Name of the Symbol	Images
3	INDUCTOR	
4	MOSFET	

S.No	Name of the Symbol	Images
5	**DISPLAY**	
6	**SCOPE**	

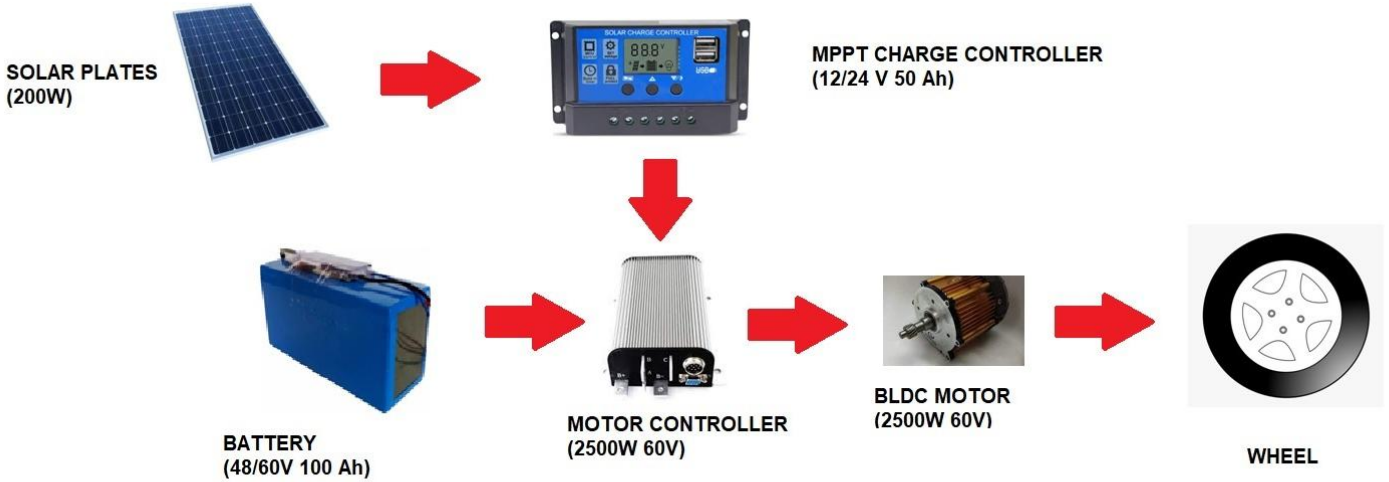
S.No	Name of the Symbol	Images
7	**STEP INPUT**	
8	**BUS SELECTOR**	

S.No	Name of the Symbol	Images
9	CONSTANT	
10	CONNECTING WIRE	

Block Diagram


Battery
MPPT Charge Controller
Solar panel
Bi-Directional DC-DC Converter
Driver Kit
Motor
Controller

Energy flow (Tractive)


SOLAR PLATES
(200W)
MPPT CHARGE CONTROLLER
(12/24 V 50 Ah)
BATTERY
(48/60V 100 Ah)
MOTOR CONTROLLER
(2500W 60V)
BLDC MOTOR
(2500W 60V)
WHEEL

Energy Flow (SLI)

HORN

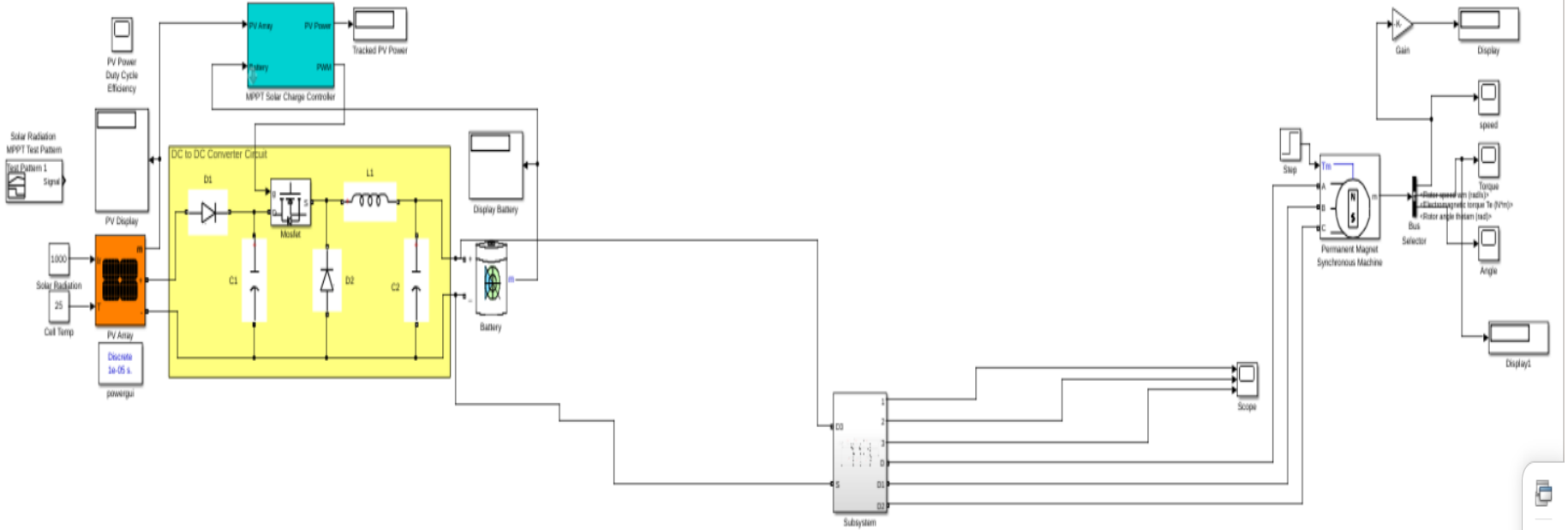
FRONT LIGHT

SLI BATTERY
12V 20Ah

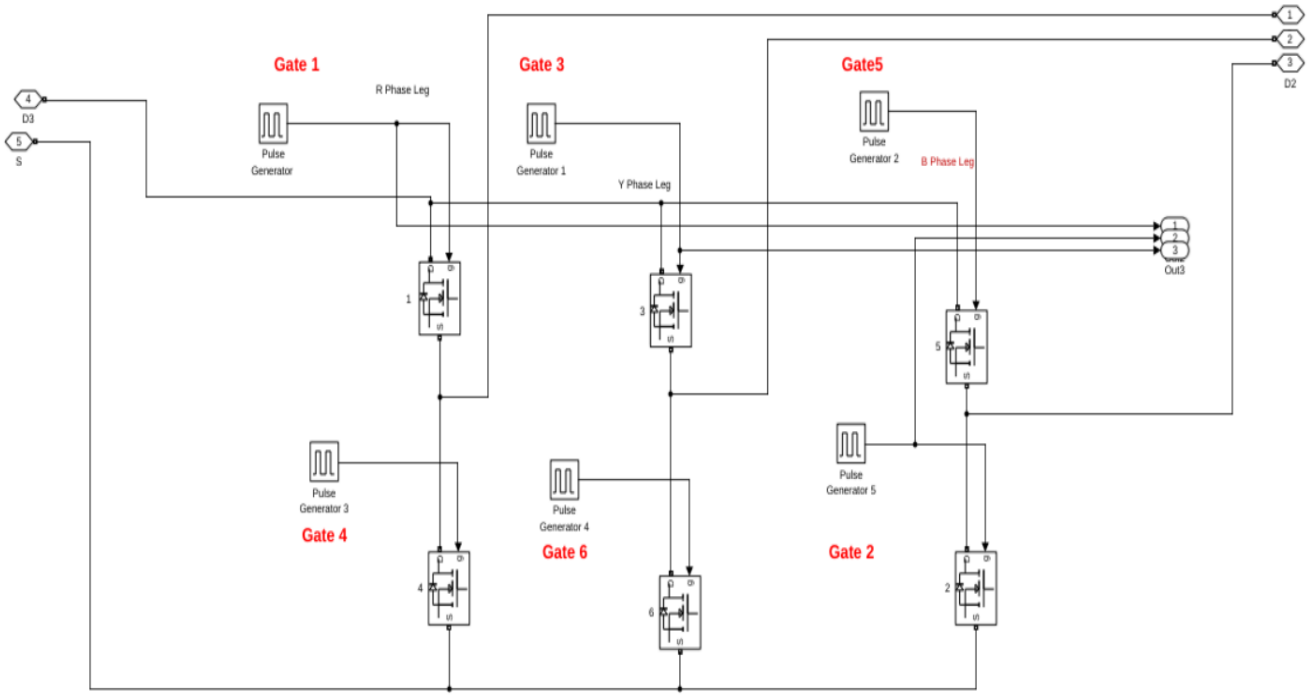
DASHBOARD

BACK LIGHT

Simulation


PV Power
Duty Cycle
Efficiency
PV Array
PV Power
Battery
PWM
MPPT Solar Charge Controller
Tracked PV Power
Solar Radiation
MPPT Test Pattern
Test Pattern 1
Signal
PV Display
DC to DC Converter Circuit
D1
L1
Mosfet
C1
D2
C2
Display Battery
1000
Solar Radiation
25
Cell Temp
PV Array
Discrete
1e-05 s.
powergui
Battery
Subsystem
Scope
Step
Tm
A
B
C
N
S
m
Permanent Magnet
Synchronous Machine
Bus
Selector
Gain
Display
speed
Torque
Angle
DisplayL

Three Phase Inverter
(Subsystem in Simulation)


Gate 1
R Phase Leg
Gate 3
Gate5
Pulse Generator
Pulse Generator 1
Pulse Generator 2
B Phase Leg
Y Phase Leg
D3
S
D2
Out3
Pulse Generator 3
Gate 4
Pulse Generator 4
Gate 6
Pulse Generator 5
Gate 2