Circuit Diagram of 3S1P Configuration (Discharging)

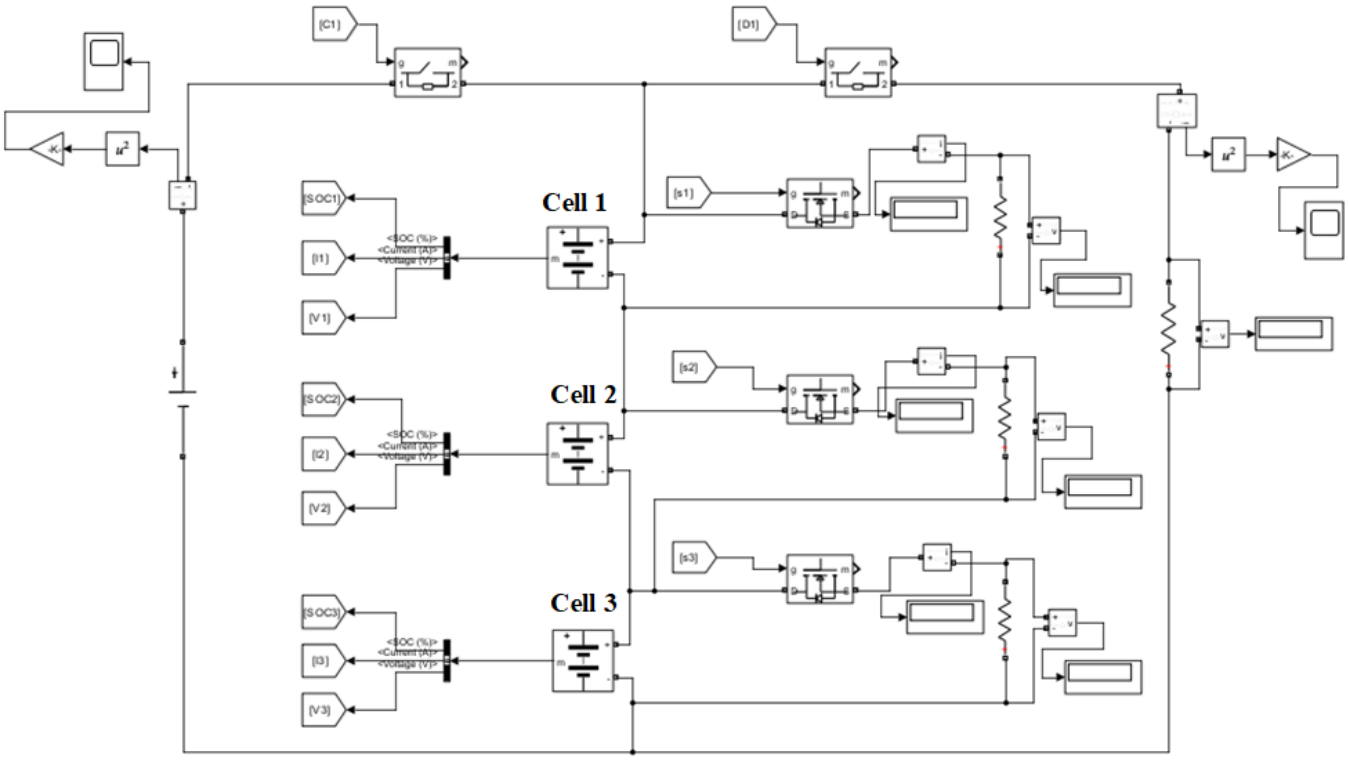

Fig 1 : *Circuit Diagram of 3S1P configuration*

Fig 1 represent the circuit diagram of 3S1P configuration of passive cell balancing. In which 3 Li-ion cells are conneted in series and make a battery pack. The cells are controlled by mosfet switches and energy dissipated by resistors which are connected to each cells. All the specification values of cells and circuit diagram are given in **Table A**.

Specification Table A : For 3S1P Configuration

Specification	Notation	Value
Nominal Voltage	V	3.6V
Nominal Capacity	C	2.6 Ah
Cut-off-Voltage	v	2.5V
Internal Resistance	R_{in}	0.013 ohm
Shunt Resistance	R_{sh}	1.3 ohm
Load Resistance	R_l	4.15 ohm
Voltage Source	V_s	12 V
Cell 1, Cell 2, Cell 3	SoC_1, SoC_2, SoC_3	70%, 60%50%
Min SoC	SoC_{Min}	50%
Mean SoC	$SoC_{mean} = \frac{SoC_1+SoC_2+SoC_3}{3}$	60%