Circuit diagram for series

(0 - 200 mA)

MC R₁ R₂

(0-30v)MC   (0-30v) MC

(0-30v) MC

RPS
(0-30v)
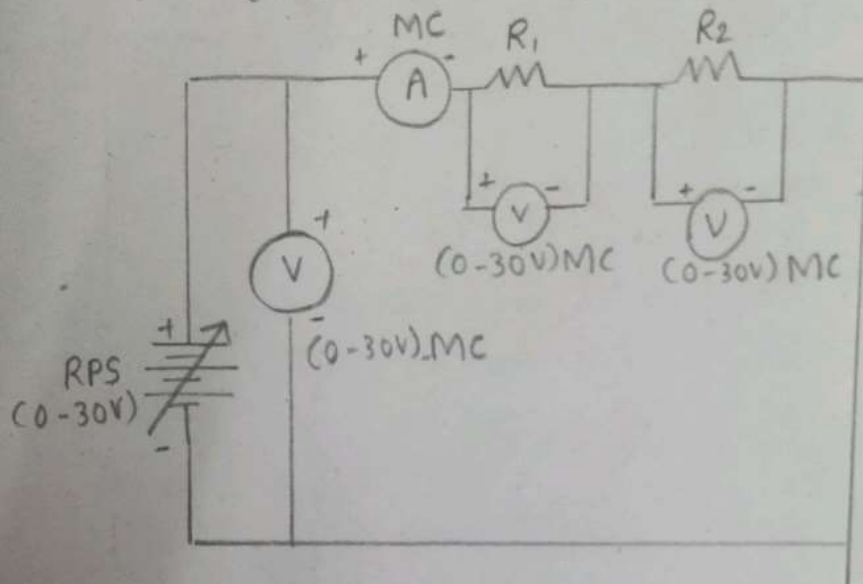
Circuit diagram for parallel

(0-200 mA)

MC

RPS
(0-30v)
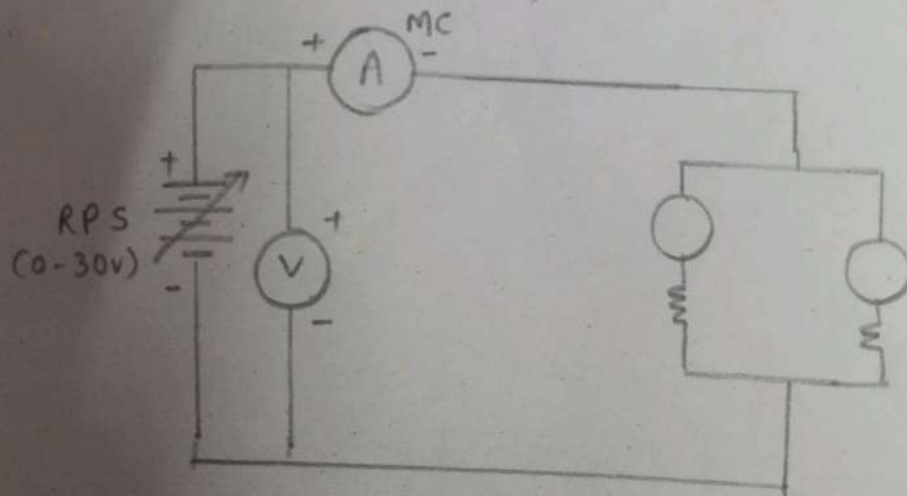
Verification of Ohm's law

Aim : To conduct a suitable experiment for verifying the ohms law.

Apparatus required :

S.No	Name of equipment	Range	Type	Quantity
1.	Ammeter	(0-200mA)	-	3
2.	Voltmeter	(0-30V)	-	3
3.	RPS	(0-30V), 2A	-	1
4.	Bread board	1A	-	1
5.	Resistors		Carbon Composed	2
6.	Connecting wires	1/22 single stranded conductor	Copper	required.

Procedure :

1. Connections are made as per circuit diagram
2. Switch on the power supply.
3. For various values of 'v' note values of current.
4. Draw a graph of voltage and current.
5. The slope of the graph gives resistance value.
6. Verify ohms law by measuring the value of 'R' using multimeter and comparing it with the practical value.

For series

S.NO	Applied Voltage	Current (A)	Voltage (V₁) (V)	Voltage (V₂) (V)

For parallel

S.NO	Applied Voltage	Current (I)	Current (mA) (I₁)	Current (mA) (I₂)

Precautions

1. Connections should be right.
2. Check the connection before switching 'on' the supply.
3. Readings should be taken without parallex error.
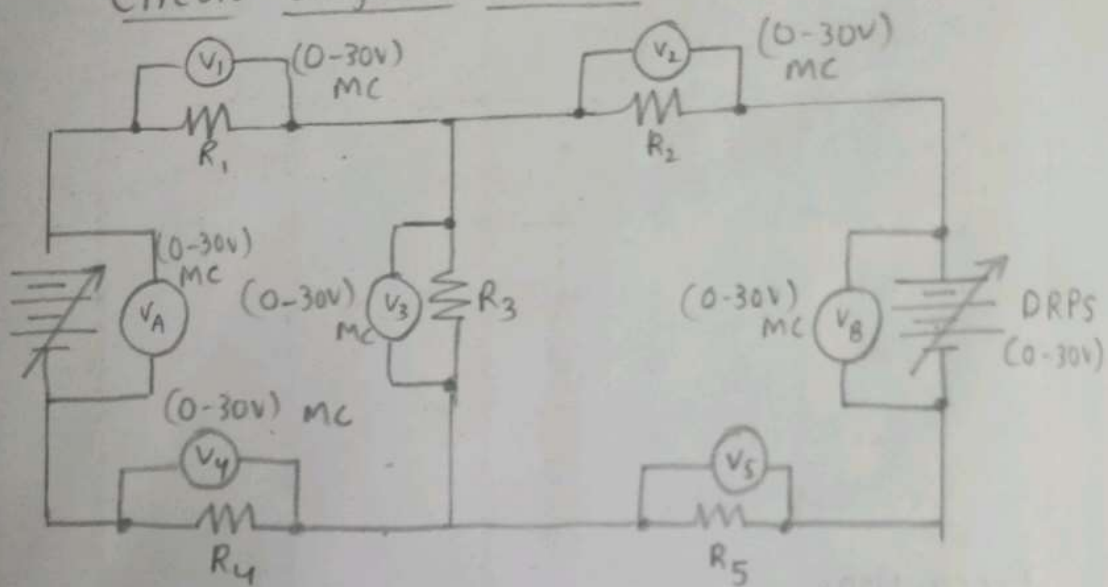
Result

Circuit diagram for KVL

Table for KVL

S.NO	Applied Voltages		Mesh-1			Mesh-2		
	V_A (v)	V_B (v)	V_1 (v)	V_3 (v)	V_4(v)	V_2 (v)	V_3(v)	V_5(v)