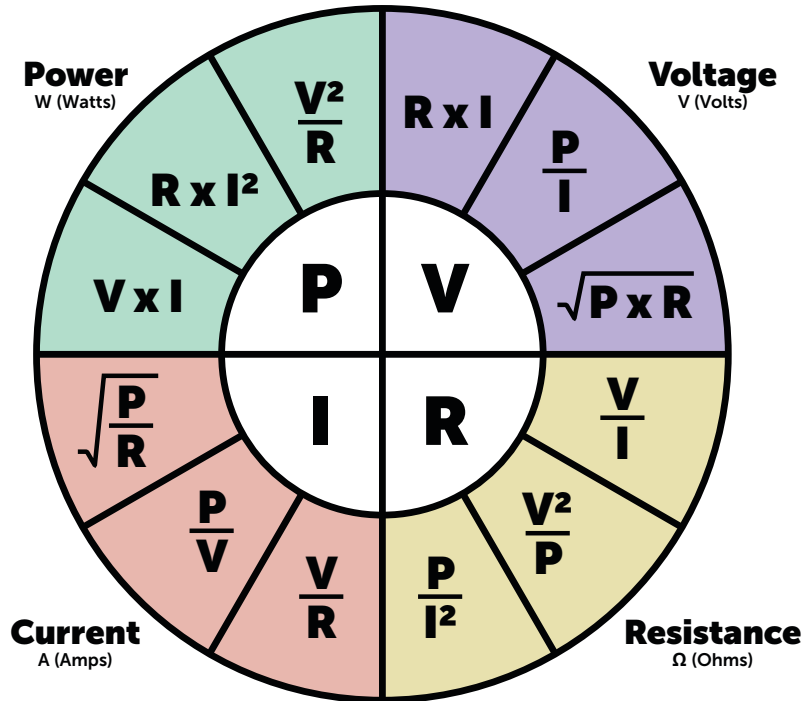


EV FUNDAMENTALS CHEATSHEET



AWG to mm²

AWG	mm ²
30	0.05
28	0.08
26	0.14
24	0.25
22	0.34
21	0.38
20	0.50
18	0.75
17	1.0
16	1.5
14	2.5
12	4.0
10	6.0
8	10
6	16
4	25
2	35
1	50
1/0	55
2/0	70
3/0	95
4/0	120

Sample Battery Specs

Common Values	18650	21700	4680
Max Voltage (V)	4.20	4.20	4.20
Nominal Voltage (V)	3.6	3.6	3.7
Min Voltage (V)	2.65	3.00	2.90
Capacity (Ah)	3.40	4.00	23.35
Energy (Wh)	12.24	14.40	86.50
Internal Resistance @25°C (Ω)	0.02	0.014	0.0054

Common Current & Cable Size (AWG)

Component	Constant Current (A)	Peak Current (A)	Common AWG (400V)	Common AWG (800V)
Battery Pack	200 - 500	600 - 1400	2/0 - 4/0	4 - 2/0
Electric Motor	200 - 500	600 - 1400	2 - 4/0	4 - 2/0
Inverter	150 - 400	600 - 1400	4 - 2/0	6 - 2
Onboard Charger	30	30 - 40	8 - 4	10 - 6
DC-DC Converter	3 - 4	6 - 7	10 - 8	12 - 10
HV Air Con	10	20	10 - 8	12 - 10
Heating System	20	25	12 - 8	14 - 12
Aux Systems	5 - 20	25 - 30	14 - 10	16 - 14
DC Fast Charging (<150kW)	200 - 400	500 - 600	2/0 - 4/0	2/0