

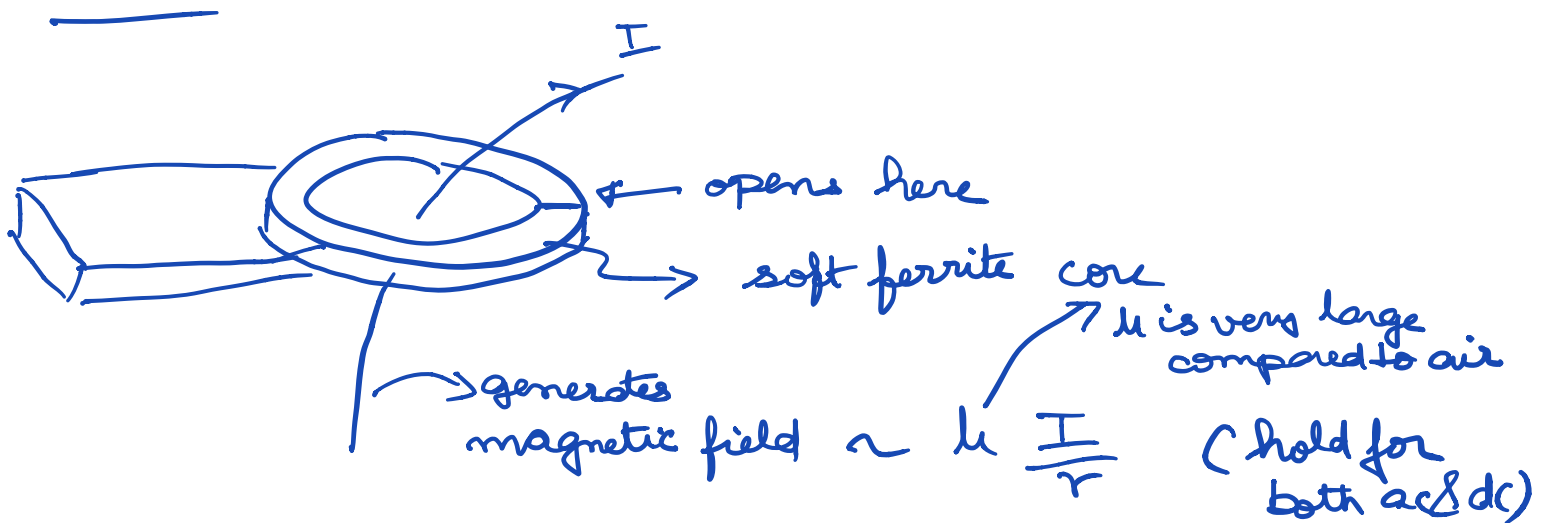
18.01.2019

ELL301

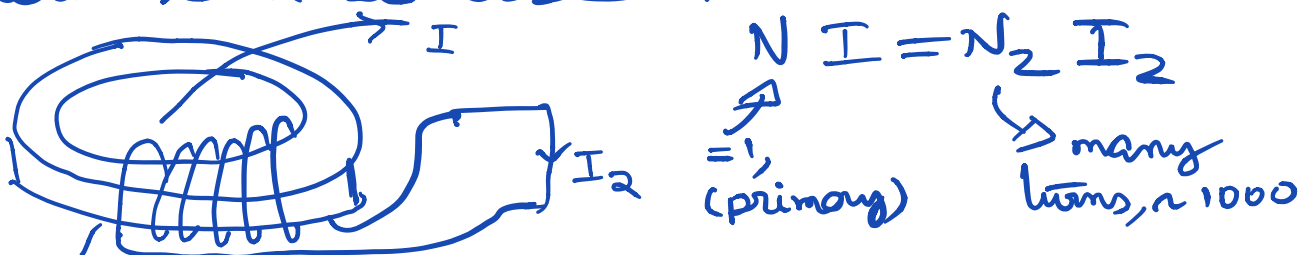
Clamp meter

Instrument to measure current.

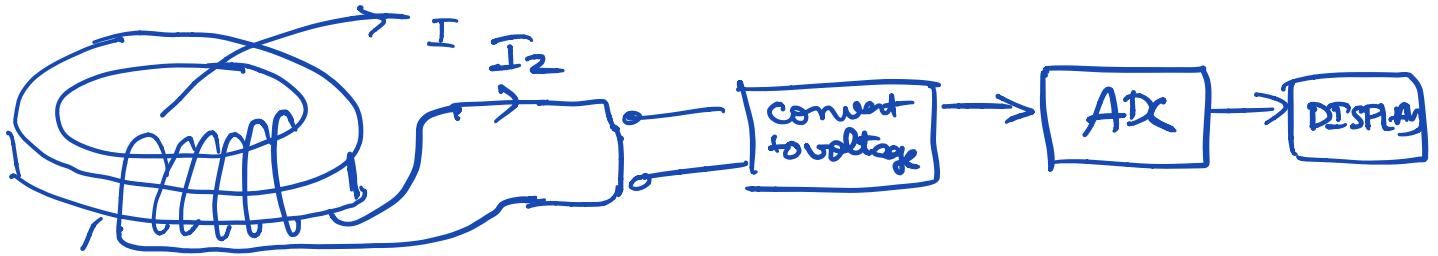
(same as the multimeter, but more convenient in the sense that the circuit under measurement does not have to be broken)



For AC current measurement, current transformer based clamp meters can be used.



$$\Rightarrow I_2 = \frac{1}{N_2} I$$

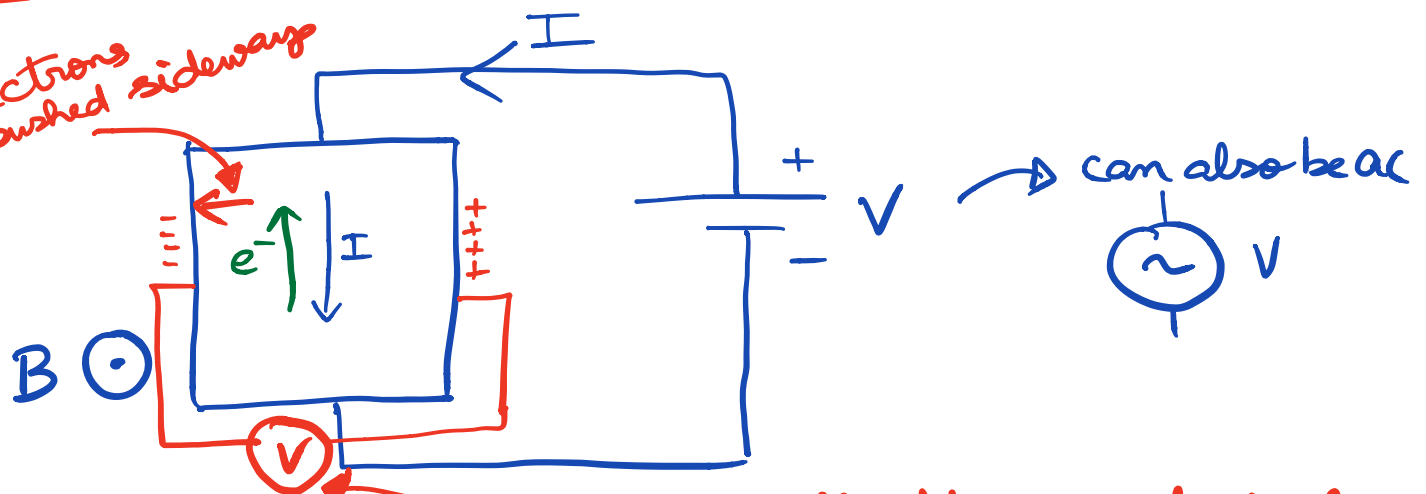


What about dc?

→ Hall effect



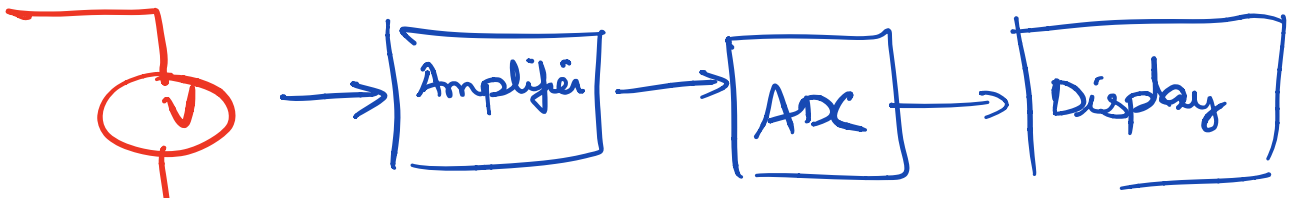
electrons are pushed sideways



$$\vec{F} = q(\vec{v} \times \vec{B})$$

works for ac & dc.

Hall effect potential developed, because of influence of magnetic field B on the already flowing current.



If V was 'ac', V would also be 'ac', and then the 'Amplifier' stage should have ac \rightarrow dc conversion before ADC.

next \rightarrow voltmeter

