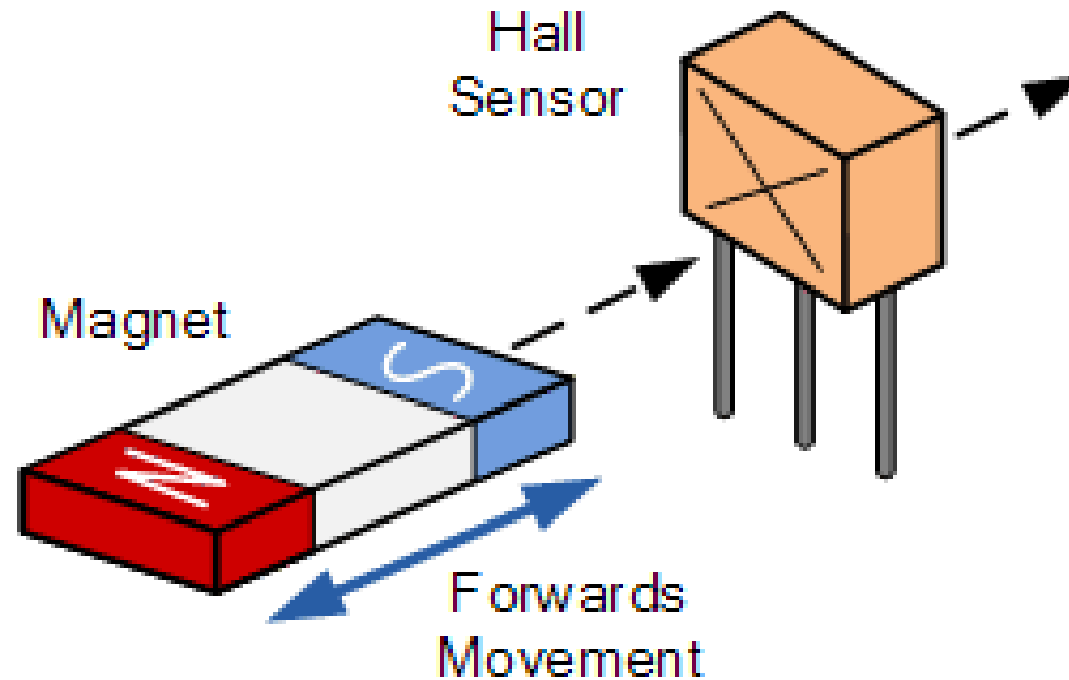


18ECO134T – Sensors and Transducers

Unit IV : Session 2 : SLO 2

Hall effect sensors or magneto galvanic sensors

- Most common and widely used type magnetic sensors.



HALL SENSORS

- A Hall effect sensor (or simply Hall sensor) is a type of sensor which detects the presence and **magnitude of a magnetic field using the Hall effect.**
- The output voltage of a **Hall sensor is directly proportional to the strength of the field**
- In a Hall sensor, a current is applied to thin strip of metal. In the presence of a magnetic field perpendicular to the direction of the current, the charge carriers are deflected by the Lorentz force, producing a difference in electric potential **(voltage) between the two sides of the strip.** This voltage difference (the Hall voltage) is proportional to the strength of the magnetic field.
- Hall sensors are used for proximity sensing, positioning, speed detection, and current sensing applications.