### Characteristics

- Large currents can be measured because the coreless structure eliminates any magnetic saturation
- Magnetic loss allows for:
  - No heat generation
  - No saturation
  - No hysteresis
- Flexible and slim due to the air-core coil
- Small insertion impedance
- Affordable
- Dedicated to AC (DC not supported)
- Not recommended for high precision measurement because of high susceptibility to noise

### Measurement Principle

- A voltage is induced in the air-core coil by interlinking the magnetic field produced by the AC current flowing in the conductor being measured (the primary side of the circuit) and the air-core coil.
- This induced voltage is then output as the time derivative \( \frac{di}{dt} \) of the measured current, and an output signal proportional to the constant current is obtained by passing it through an integrator.