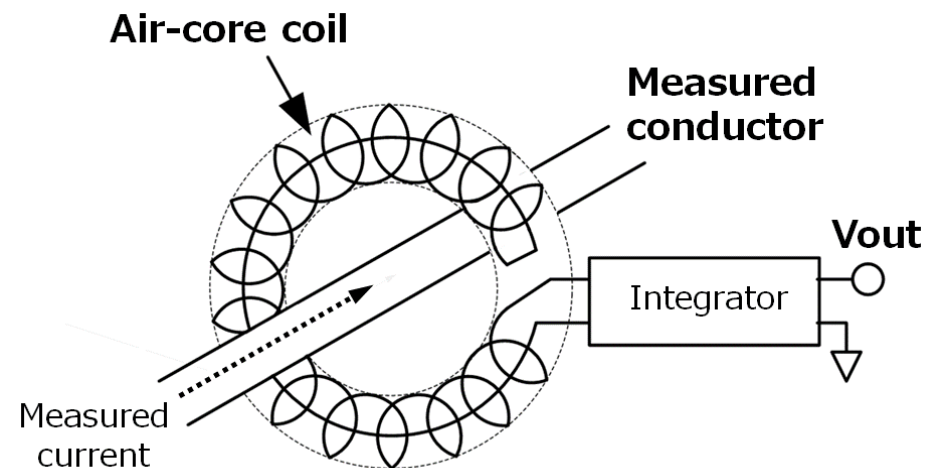


Details of Current Sensors by Operating Principle

③ Rogowski Coil Method (AC only)

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 (di/dt)** of the measured current, and an output signal proportional to the constant current is obtained by passing it through an **integrator**.

Hioki Rogowski Coil Method (AC only) Sensors

CT7046, CT7045, CT7044, CT9667-01, CT9667-02, CT9667-03