

The henry (abbreviated H) is the Standard International (SI) unit of inductance. Reduced to base SI units, one henry is the equivalent of one kilogram meter squared per second squared per ampere squared ( $\text{kg} \cdot \text{m}^2 \cdot \text{s}^{-2} \cdot \text{A}^2$ ). In a circuit where the current is changing at a constant rate of one ampere per second (A/s), an inductance of 1 H results in the generation of one volt (1 V) of potential difference across an inductor. More rapid current changes produce much greater surges of electromotive force (EMF). This is the principle by which a spark coil generates a high and dangerous voltage. The henry is a large unit of inductance. In audio frequency (AF) and radio frequency (RF) applications, units of millihenrys (mH), where  $1 \text{ mH} = 10^{-3} \text{ H}$ , and microhenrys ( $\mu\text{H}$ ), where  $1 \mu\text{H} = 10^{-6} \text{ H}$ , are common. Occasionally, the filter choke in a power supply, or a field coil designed to produce a large voltage upon release of its stored magnetic energy, will be found whose value can be expressed in henrys. In very high frequency (VHF), ultra high frequency (UHF), and microwave devices and systems, units of nanohenrys (nH), where  $1 \text{ nH} = 10^{-9} \text{ H}$ , and picohenrys (pH), where  $1 \text{ pH} = 10^{-12} \text{ H}$ , are used.

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