Pencil coils

An LVDT (linear variable differential transformer) delivers a signal proportional to the linear position (displacement) of a magnet fi xed to a moving part.

A primary coil is energized to create a magnetic fi eld that is coupled into two secondary coils. The difference between the resulting voltages induced in the two secondary coils varies with the position of the magnet and provides the basic position signal. An ASIC is used to condition the signal. The complete sensor can be located outside the housing of the part in a less severe environment, providing non-contact measurement of displacement through metal walls, or the sensing component can be located inside the housing with the electronics outside.

Electricfil solution - ready technologies

Characteristics

- Weight < 180 g
- Primary current: 6.5 A
- Secondary voltage: 26 kV (1 MO)
- Arc current: 64 mA
- Arc duration: 1.16 ms
- Energy: 34 mJ (1000V Zener load)
- Operating temperature: -40°C < T < +160°C
- Ignition type: mono, single- or multi-spark

Electricfil knowhow

- Reduced weight and size of the ignition function with high energy densities
- Fits in narrow sparkplug wells of 18 to 24 mm diameter.
- Standardization
- Can be supplied as individual components or in rack format to combine the advantages of the pencil coil with those of an integrated ignition coil unit
- Integration of power electronics

Application domains

Engine management

Ignition applications