

50/60 Hz Current Sense Transformer



This Coilcraft current sense transformer is intended for use in measuring 50/60 Hz line currents from 0.5 to 20 Amperes rms. Typical application shown below yields an output of 0.1 Volt per Ampere. The sensitivity may be changed by adjusting the value of the terminating resistance (R_T). These parts also can be used to measure 400 Hz line currents.

To request free evaluation samples, contact Coilcraft or visit www.coilcraft.com.

Weight 19 g

Terminations Tin-silver over tin over nickel over copper

Packaging 30 per tray

Isolation (hipot) 2500 Vrms, one minute, between windings

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#)

| Part number | Turns (N) pri : sec | Inductance ¹ min (mH) | DCR max (Ohms) | | Frequency range ² (Hz) | Sensed current range I_{in} | R_T for 1.0 V_{out} from 10 A I_{in} ³ |
|-------------|---------------------|----------------------------------|----------------|-------|-----------------------------------|-------------------------------|---|
| | | | 1,2 – 3,4 | 8 – 5 | | | |
| CS2106L | 1:500 | 75 | 0.007 | 26 | 50 – 400 | 0.5 A – 20 A | 68 Ohms |

1. Inductance is for the secondary, tested at 1 kHz, 0.1 Vrms.
2. Square wave response deteriorates above and below this frequency.
3. Use the following equation to determine the approximate change in output voltage/ input ampere when varying the terminating resistor:
 $V_{out} / I_{in} = 0.1 \times (R_T / 68)$.
4. Ambient temperature range -40°C to $+85^{\circ}\text{C}$.
5. Electrical specifications at 25°C .

Typical Circuit



Typical Response (with $R_T = 68$ Ohms)

