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 output voltage 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°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

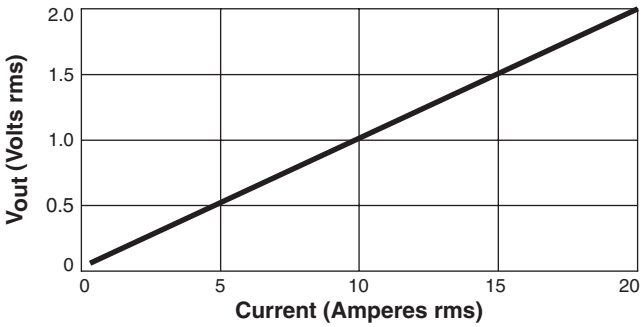
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf

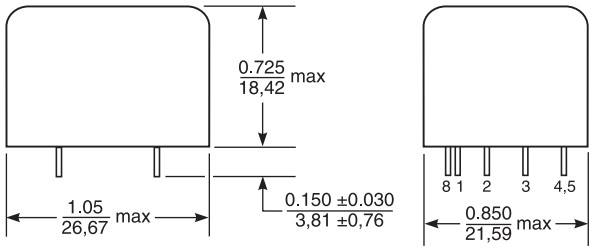
Part number	Turns (N) pri : sec	Inductance[1] min (mH)	DCR max (Ohms) 1,2 – 3,4	DCR max (Ohms) 8 – 5	Frequency range[2] (Hz)	Sensed current range I_{in}	R_T for 1.0 V_{out} from 10 A I_{in}[3]
CS2106L	1:500	75	0.007	26	50 – 400	0.5 A – 20 A	50 Ohms

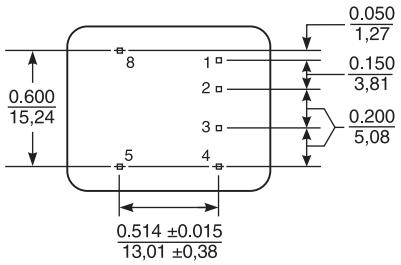
1. Inductance is for the secondary, tested at 1 kHz, 0.1 Vrms.
2. Square wave response deteriorates above and below this frequency.
3. Use the following equation to determine the approximate change in output voltage/ input ampere when varying the terminating resistor: Vout / Iin = 0.1 × (R_T / 50).
4. Ambient temperature range –40°C to +85°C.
5. Electrical specifications at 25°C.

Typical Circuit

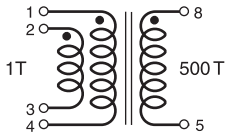
Typical Response (with R_T = 50 Ohms)







Unless specified, tolerances are ±0.005/0,127
All pins are 0.025/0,64 square.



Primary windings to be connected in parallel on the PC board

Dimensions are in inches / mm

Coilcraft
www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

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