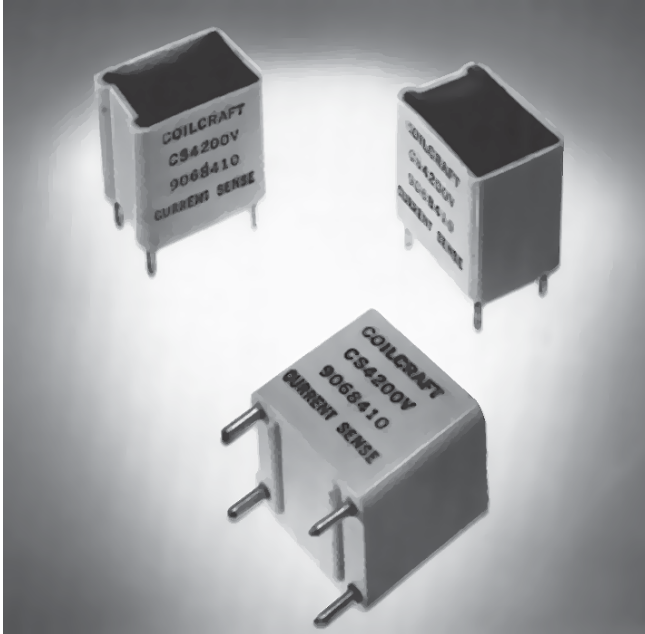


# Current Sensing Transformers



These low cost Coilcraft current sensing transformers are designed for use up to 100 kHz. They incorporate the current and sense windings in one small, encapsulated package requiring minimum board space.

Varying the terminating resistance allows sensitivities of 1 to 100 Volts output per Ampere input.

Coilcraft current sensing transformers are designed to provide 6 mm creepage/clearance between primary and secondary windings

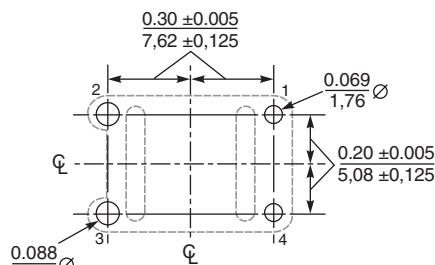
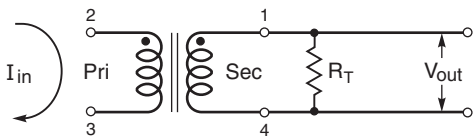
Applications include feedback control, overload sensing, detecting load drop or shutdown, and proportional output.

Coilcraft **Designer's Kit P403** contains the three standard current sensing transformers, sensor-only versions of each, plus two 50/60Hz current sensors. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

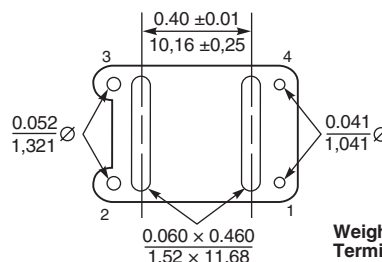
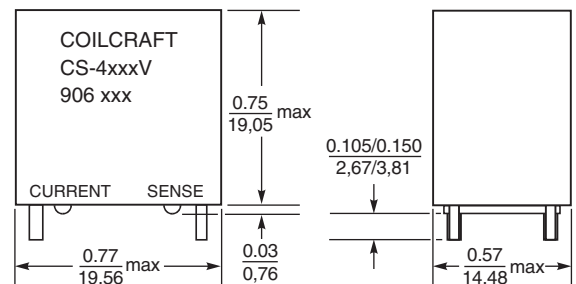
Part number	Turns (N) pri : sec	Inductance <sup>1</sup> min (mH)	Frequency range <sup>2</sup> (kHz)	Sensed current range $I_{in}$	Terminating resistance $R_T$ <sup>3</sup> range (Ohms)	$R_T$ for 1 $V_{out}$ from 1 A $I_{in}$
CS4050V-01L	1 : 50	5	5 – 25	2 mA – 10 A	50 – 5000	50 Ohms
CS4100V-01L	1 : 100	20	5 – 50	5 mA – 24 A	100 – 10,000	100 Ohms
CS4200V-01L	1 : 200	80	1 – 100	5 mA – 35 A	200 – 20,000	200 Ohms

1. Inductance is for the secondary, measured at 15.75 kHz, 1 Vrms.
2. Square wave response deteriorates above and below this frequency.
3. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation:  $R_T = V_{out} \times N_{sec} / I_{in}$
4. Operating temperature range  $-40^\circ\text{C}$  to  $+85^\circ\text{C}$ .
5. Electrical specifications at  $25^\circ\text{C}$ .

## Typical Circuit



**Recommended PC Board Layout**



**Weight:** 8.8 – 9.3 g  
**Terminations:** Tin-silver over copper  
**Packaging:** 28 per tube

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.  
 Please check our website for latest information.

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