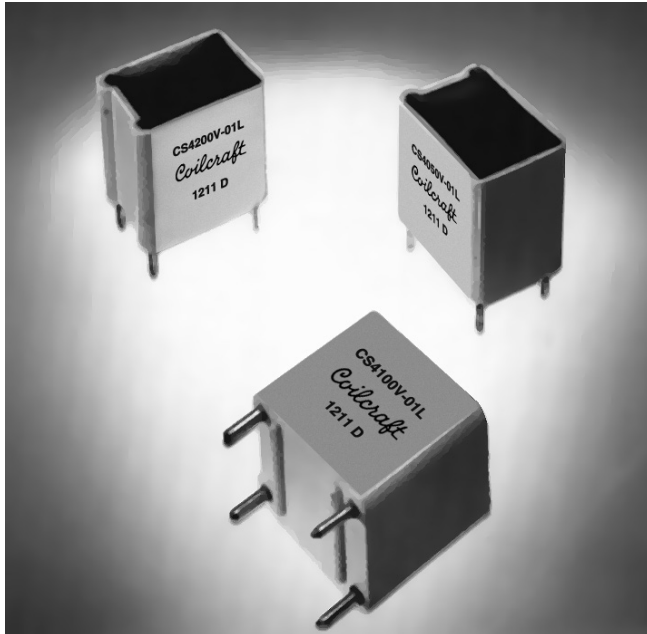




# Current Sense Transformers



These low cost Coilcraft current sensing transformers are designed for use up to 1 MHz. They incorporate the current and sense windings in one small, encapsulated package requiring minimum board space.

Coilcraft current sensing transformers are designed to meet UL/CSA/IEC 60950 Reinforced Insulation specification and provide 3 mm creepage/clearance between primary and secondary windings. Winding to winding isolation (hipot) is 3750 Vrms, tested for one minute.

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>.

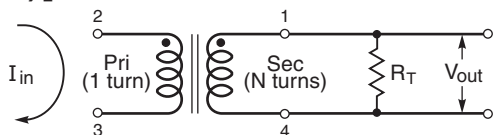
Part number	Turns (N) pri : sec	Inductance <sup>1</sup> min (mH)	DCR max (Ohms)		Frequency range (kHz)	Volt-time product <sup>2</sup> (Vµsec)	Sensed current I <sub>in</sub> max (A)	Terminating resistance R <sub>T</sub> <sup>3</sup> (Ohms)
			pri	sec				
CS4050V-01L	1:50	5	0.001	0.7	3 – 1000	149	35	1.4
CS4100V-01L	1:100	20	0.001	1.4	2 – 1000	298	35	2.9
CS4200V-01L	1:200	80	0.001	4.0	1 – 1000	596	35	5.7

1. Inductance is for the secondary, measured at 15.75 kHz, 1 Vrms.
2. Volt-time product is for the secondary, between pin 1 and 4.
3. Terminating resistance (R<sub>T</sub>) value is based on 1 Volt output with 35 Amps flowing through the primary. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation:  

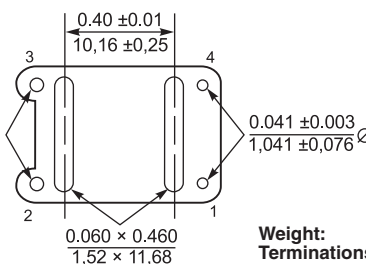
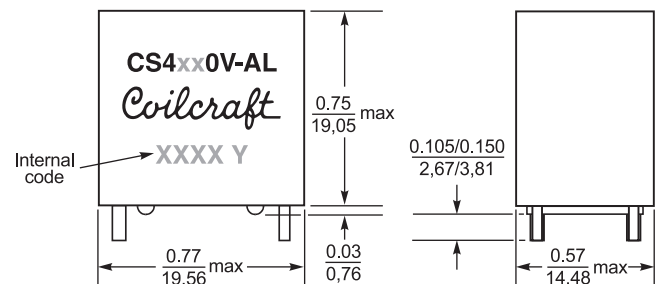
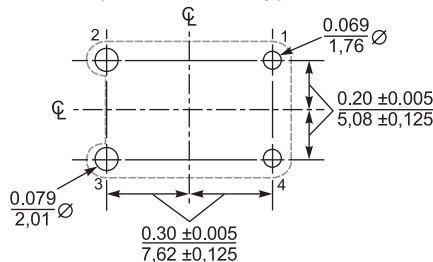
$$R_T = V_{out} \times N_{sec} / I_{in}$$

4. Ambient temperature range -40°C to +85°C.
5. Electrical specifications at 25°C.

## Typical Circuit



## Recommended PC Board Layout (viewed from top)



**Weight:** 8.8 – 9.3 g  
**Terminations:** Tin-silver over copper  
**Packaging:** 29 per tube



**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

Document 132 Revised 05/05/21

© Coilcraft Inc. 2021  
 This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.