

Current Sense Transformers Feature Built-In Sense Winding Capability

[Triad Magnetics](#)'s CST25 series current-sense transformers feature a built-in sense-winding capability that eliminates the need for additional wiring and jumpers, to conserve circuit board space, reduce layout complexity and increase installed reliability. These transformers are well suited for monitoring current in high-frequency applications such as LED lighting, switched-mode power supplies and other applications with tight board layouts (see the figure).

Current sense transformers help monitor and control circuits. In power supplies, for example, they detect the current while maintaining electrical isolation as loads change. They are highly efficient and accurate, finding application in a wide variety of equipment types and industries.

The CST25 series transformers are available in five different popular turns ratios, ranging from 1:50 to 1:1000. They operate over a wide temperature spectrum of -40°C to +100°C for use in extreme temperature applications.

These transformers feature minimum secondary inductance ranges from 4.7 to 1900 mH, with the maximum secondary current ranging from 50 to 500 mA. The maximum secondary DCR is 0.5 to 50 Ω . Maximum ET is 175 to 3500. The rated primary current is 25 A.

The thru-hole style CST25 package comes in a compact footprint, which is 0.464 in. (11.80 mm) tall. Length is 0.66 in. (17 mm) by 0.59 in. (15 mm) width (see the figure). These transformers are fully RoHS compliant, meeting the 2015/863/EU Directive to help protect the environment.

The rugged and reliable transformers come in fully encapsulated packages. Encapsulation allows for a high isolation of up to 4000 Vac between the primary and secondary windings for added safety in demanding power environments.

The CST25 transformers are priced starting at \$0.95 each in minimum quantities of 1,000 pieces. They are available off-the-shelf from a broad network of popular distributors. In addition to standard models, Triad's U.S. Design Center is available to meet custom-engineered requirements. For more information, see the CST25 web [page](#).



Figure. Intended for monitoring currents in high-frequency applications such as switch-mode power supplies, LED lighting, etc., the CST25 series current sense transformers are offered with a built-in sense winding allowing for ease of use. These current sense transformers are fully encapsulated allowing for a high isolation of 4000 VAC between primary and secondary windings.