

Renesas Ready Ecosystem Partner Solution CTS 3-Phase Current Sensor Solution

RENESAS

PARTNER
NETWORK

READY

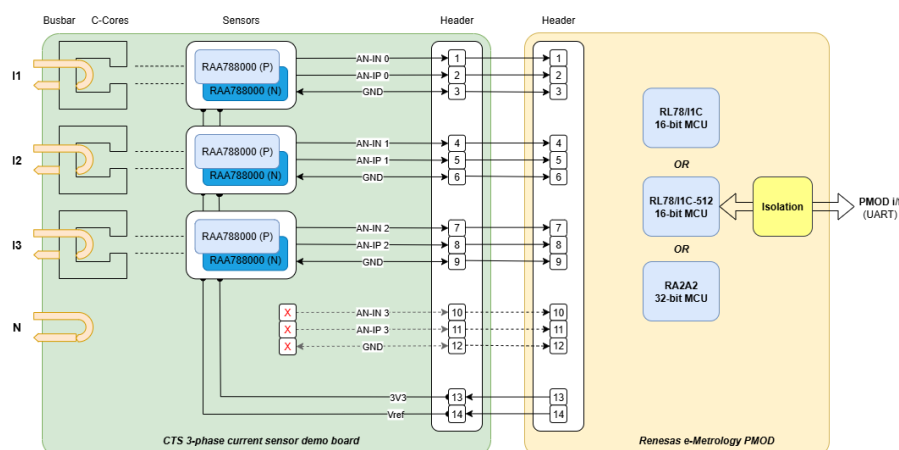
Solution Summary

The CTS 3-phase current sensor demo board enables accurate measurement of up to three independent AC currents, each up to 100A. A high-linearity laminated magnetic core, combined with Renesas metrology MCUs such as the [RL78/I1C](#) or [RA2A2](#) and [RAA788000 Rogowski](#) effect current sensor, delivers precise analog measurements for standard 50/60Hz metering applications. With the optimized material and custom design, the solution achieves better than $\pm 0.5\%$ accuracy across the 0.1A to 100A range, meeting IEC, ANSI, and CENELEC requirements.

Features/Benefits

- High magnetic linearity range
- Uniform frequency response
- High dynamic range 0.1-100 A
- Low hysteresis
- DIN mountable
- Standard C5 core geometry link

Diagrams/Graphics



Target Markets and Applications

- AC current sensing
- Metering
- Electrical vehicle charging station
- Electrical laboratory

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CTS is a leading designer and manufacturer of products such as [Actuators](#), [Current Sensors](#), [Passive Components](#), [Pedals & Foot Controls](#), [Piezoelectric Components](#), [Position Sensors](#), [Switches](#), and [Temperature Sensors](#). We provide solutions to OEMs in the aerospace & defense, medical, industrial, communications, information technology, and transportation industries in North America, Europe, and Asia.

Current Sensors

Modular Sensor Designs

CTS designs Alternating Current (AC) and Direct Current (DC) sensors for industrial and automotive applications. We provide different mounting designs such as busbar, PCB, and clamp-on. With off-the-shelf solutions or completely customized options, we have various choices allowing our customers to find saleable designs that fit their price range.



Scalable Design for Easy Customization

We provide customized solutions to meet a wide range of performance needs based on our established modular design building blocks. These sensors reach up to 2000 A and are accurate within $\pm 1\%$, allowing for tailored designs that fit most unique motor needs.



Module Manufacturing

Thanks to our manufacturing partners in India we are able to manufacture magnetic components, including over-molding, electronics and busbars up to several million units per year at very competitive prices.



Standard Products

We offer cost-effective solutions for high-amperage applications, featuring standard packaging and mounting options. Our sensors can be integrated into circuit board applications or used in stand-alone mounting packages for easy installation.



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