

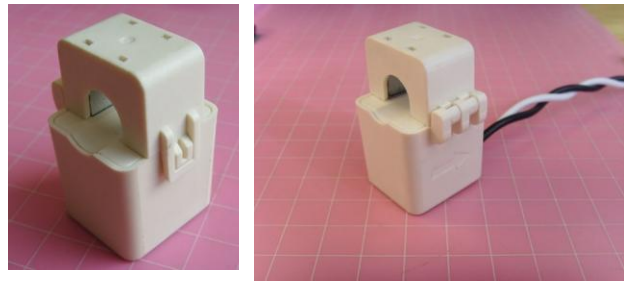
## Miniature Split Core Current Transformer

The **CTSA010 r3.0** Series of low cost miniature split-core current transformers are designed for fast and easy installation. The split-core design permits non-contact current measurements through magnetic field induction without requiring that the primary wire be taken offline and disconnected for CT installation. This method permits a safer, easier and portable current measurement.

The relatively small physical size accommodates applications where the installation of the CT will be in physically small spaces.

Miniature split-core current transformers models:

- CTSA010 Series – 10.2mm (0.40”) opening
- CTSA016 Series – 16.2mm (0.64”) opening
- CTSA024 Series – 24.2mm (0.95”) opening
- CTSA035 Series – 35.2mm (1.39”) opening.



### Features:

**Rated Primary:** 5A, 10A, 15A, 20A, 30A, 50A or 75A

**Secondary Output:** 0.333V at rated current

Optional: mA secondary output, standard winding ratios -

- 1:1000, 1:2000
- 1:2500, 1:3000

### Specifications:

- Frequency: 50 to 400Hz.
- Maximum operating voltage: 720VAC.
- Dielectric withstand voltage: 2,500V for 1 minute.
- Dielectric resistance: 100 MOhms @ 500 VDC
- Operating Temperature: -15°C to +60°C.

- Construction:
  - Ferrite core material.
  - Epoxy encapsulated housing.
  - Case material – Nylon, UL flame retardant rating 94 V-0.
- Leads: 0.61m (2Ft), AWM 1015, Twisted Pair, 0.34mm<sup>2</sup> (22AWG), 600V.
- Lead termination: Stripped and tinned.
- ETL Certified (Control Number 4002689)
- RoHS compliant.



### Performance:

- Accuracy Class: 0.5, 1.0 (IEC 60044-1)
- Accuracy: < 1%
- Phase Shift: < 120 minutes
- Linearity: ±1% from 5% to 130% of rated primary current.

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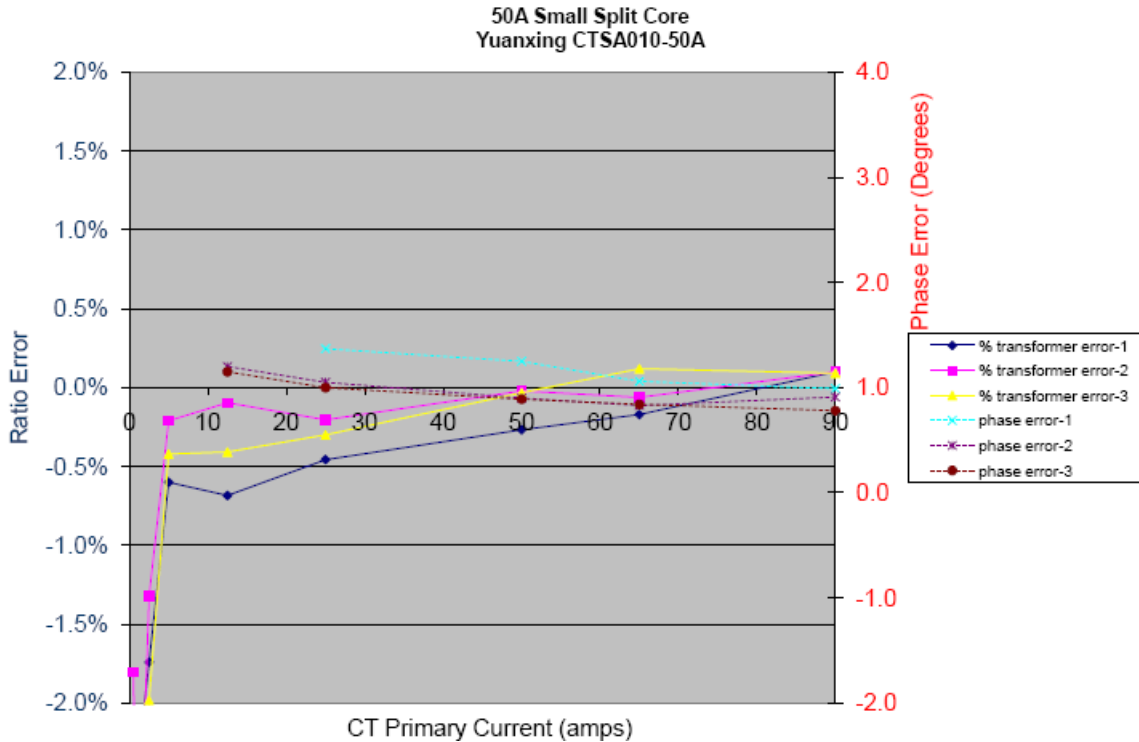
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**Typical Performance – CTSA010-50A:**



**CTSA010-50A/ 0.333V**

	Primary Input as % Rated Current						
	5%	10%	20%	50%	100%	120%	150%
Ratio Error f(%)	-0.024	-0.091	-0.107	-0.132	-0.105	-0.129	-0.206
Phase Error $\delta(^{\circ})$	92.00	87.82	84.80	74.74	71.08	73.05	83.67

**CTSA010, Ratio 1:3000, R<sub>LOAD</sub>=10 Ohm**

	Primary Input								
	0.1A	0.5A	1A	2A	5A	10A	20A	50A	65A
Ratio Error f(%)	-0.168	-0.230	-0.216	-0.204	-0.075	-0.066	-0.046	-0.010	-0.285
Phase Error $\delta(^{\circ})$	80.00	78.40	76.60	73.40	68.70	61.30	55.20	54.10	73.90

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**Data Sheet**  
**CTSA010 Split-Core Current Transformer**

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**Representative Configuration:**

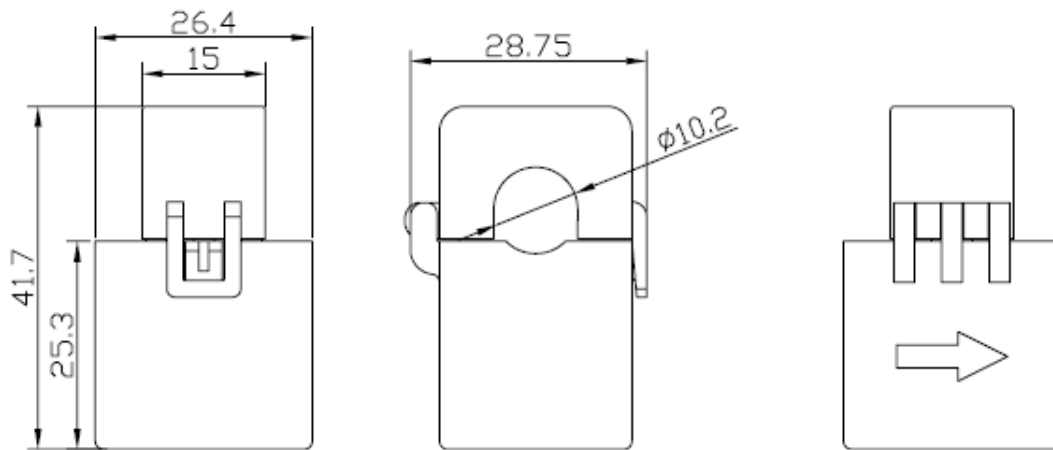
CTSA010-20A/ 0.333V

Winding ratio – 1:2162  
Precision resistor value – 36.0 ohms

CTSA010-50A/ 0.333V

Winding ratio – 1:2700  
Precision resistor value – 18.0 ohms

**Outline Drawing:**



**Custom split-core current transformer designs** are available to meet the specific application requirements. For a no obligation technical evaluation, please provide the specific performance requirements to [engineering@tichenassociates.com](mailto:engineering@tichenassociates.com) or the address below.

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