

## Miniature Split Core Current Transformer

The **CTSA024** 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:

- Ferrite core: 50A to 200A
- Silicon steel: 50A to 400A

**Secondary Output:** 0.333V @ 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:
  - Core material: ferrite or silicon steel.
  - 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.

- ETL Certified (Control Number 4002689)



- RoHS compliant.



### Performance:

- Accuracy Class: 0.5, 1.0 (IEC 60044-1)
- Accuracy: < 1.0%
- Phase Shift: < 60 minutes with 5 ohms burden.
- Linearity: ±1% from 5% to 130% of rated primary current.

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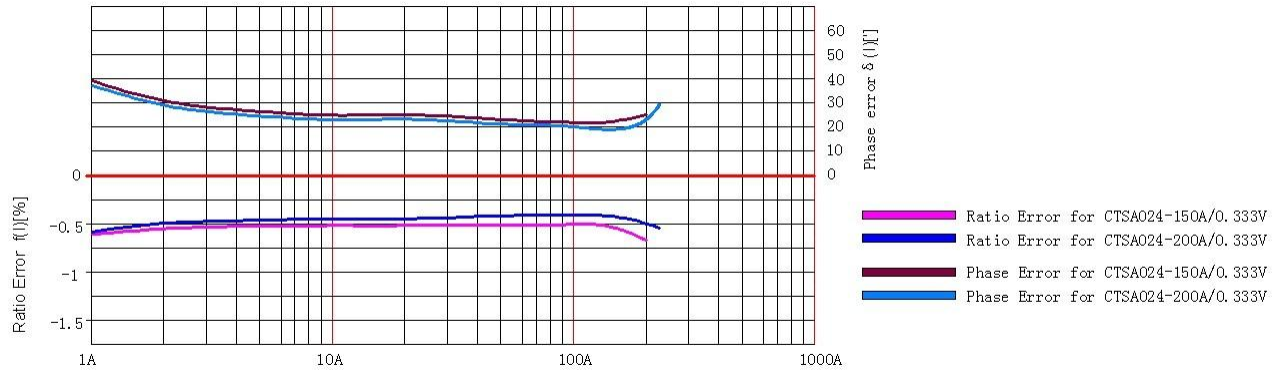
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**Typical Performance – CTSA024-150A & 200A:**



**CTSA024-150A/ 0.333V**

	Primary Input as % Rated Current						
	5%	20%	50%	80%	100%	120%	150%
Ratio Error f(%)	-0.489	-0.452	-0.431	-0.462	-0.535	-0.724	
Phase Error δ(°)	26.5	22.2	18.8	18.9	20.1	28.6	

**CTSA024-200A/ 0.333V @ 50HZ**

	Primary Input as % Rated Current						
	5%	20%	50%	80%	100%	120%	150%
Ratio Error f(%)	-0.423	-0.395	-0.385	-0.429	-0.559	-0.630	
Phase Error δ(°)	23.5	21.3	18.1	16.8	20.7	23.5	

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**Representative Configuration:**

CTSA024-100A/ 0.333V

Winding ratio – 1:3000  
Precision resistor value – 10.0 ohms

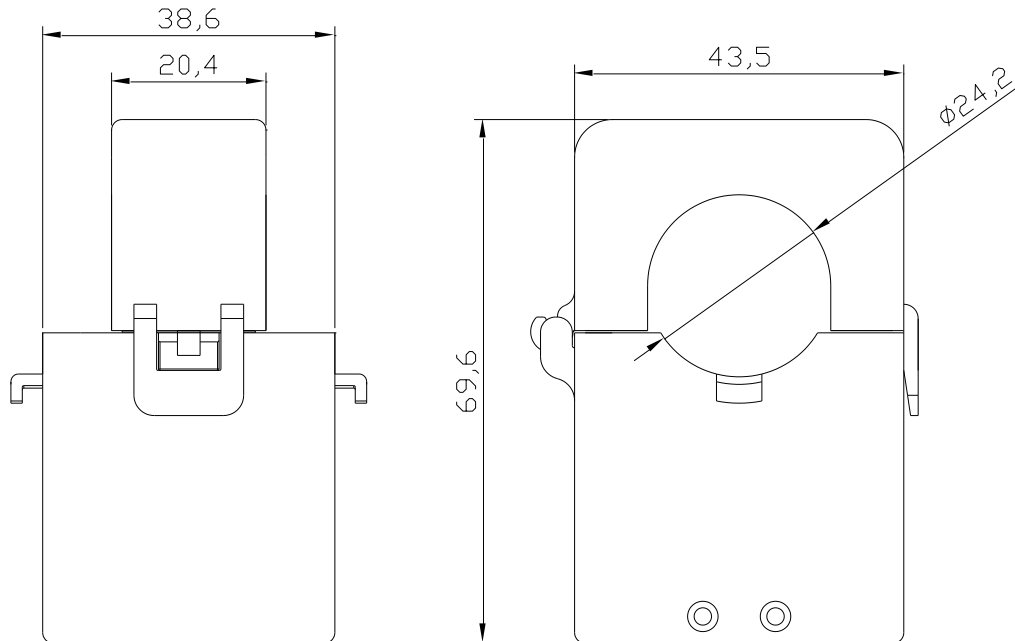
CTSA024-150A/ 0.333V

Winding ratio – 1:3378  
Precision resistor value – 7.5 ohms

CTSA024-200A/ 0.333V

Winding ratio – 1:3603  
Precision resistor value – 6.0 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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