

Toroidal Current Transformer

The **TA21B11** Series of low cost toroidal current transformers are designed for application where an AC current signal must be transformed into lower AC current or voltage signal appropriate for micro-processor based circuits.

The TA21B11 series are designed specifically for integration into products which require exceptionally accurate signal transformation with low phase shift while exposed to harsh environmental operating conditions.



Features:

Rated Primary: 5A to 50 A

Secondary Output:

- 0.333V to 7.07V @ Rated Current, or
- mA, standard winding ratios:
 - 1:1000, 1:2000
 - 1:2500, 1:3000

Available in PCB mounted configuration or with lead wires.

Asymmetrical mounting.

Specifications:

- Frequency: 50 to 400 Hz.
- Isolation Voltage: 2500 V_{RMS}, 1 minute @ 0.5mA.
- Surge withstand potential: 5000V (1.2/50μsec standard shock wave).
- Dielectric Resistance: 1,000 M ohms @ 500 Vdc.
- Rated Load Resistance:
 - mV output: ≥ 100k Ohms.
 - mA output: ≤ 200 Ohms.

- Operating Temperature: -25°C to +55° C (Optional: -40°C to +85° C)
- Construction:
 - Core material: Nanocrystalline or Nickel alloy
 - Case Material: PBT Resin, UL Flame retardant rating 94 V-0.
 - Epoxy encapsulated
- CE Approved
- RoHS Compliant



Performance:

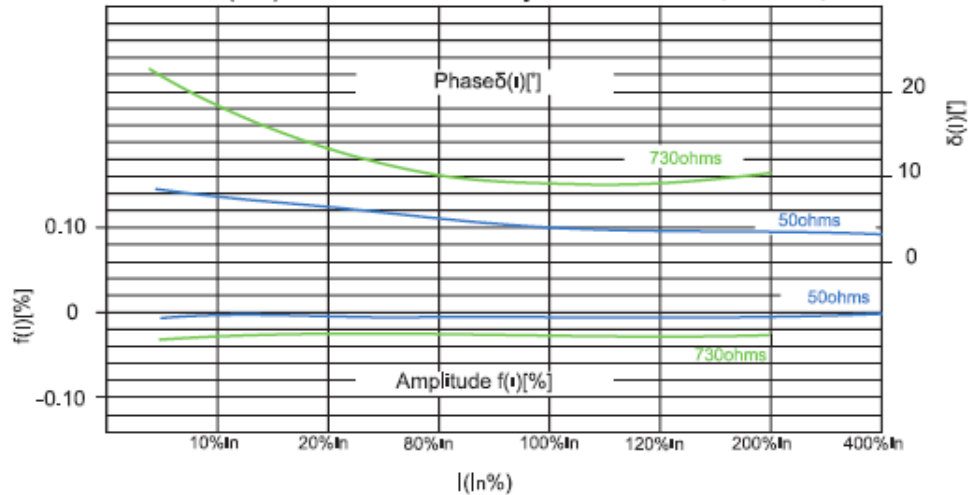
- Accuracy Class: 0.1L, 0.2L or 0.5L (IEC 60044-1)
 - 0.1L, 0.2L @ 50A when secondary burden ≤ 50 ohms.
 - 0.2L, 0.5L @ 30A when secondary burden ≥ 100 ohm.
- Accuracy: ≤ ± 0.1% @ Rated current
- Phase shift: ≤ 10' @ Rated current
- Linearity: 5 to 120% of Rated primary current

Typical Performance TA21B11-5A/ 2mA (Secondary Burden $R_L = 0 \Omega$)

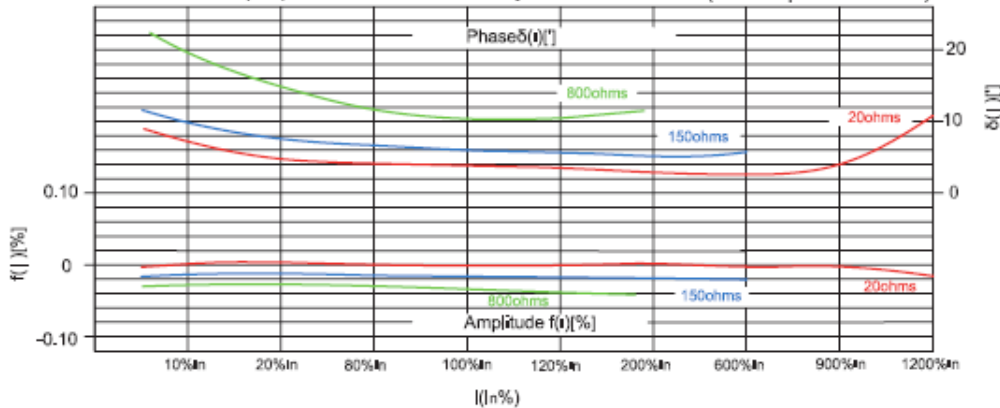
Rated Primary Current	5%	20%	50%	80%	100%	120%
Ratio Error (%)	0.037	0.027	0.001	-0.010	-0.012	-0.016
Phase Shift Error (')	9.7	8.7	6.8	5.6	5.0	4.4

Typical Performance – Impedance Dependence of Phase and Amplitude Errors

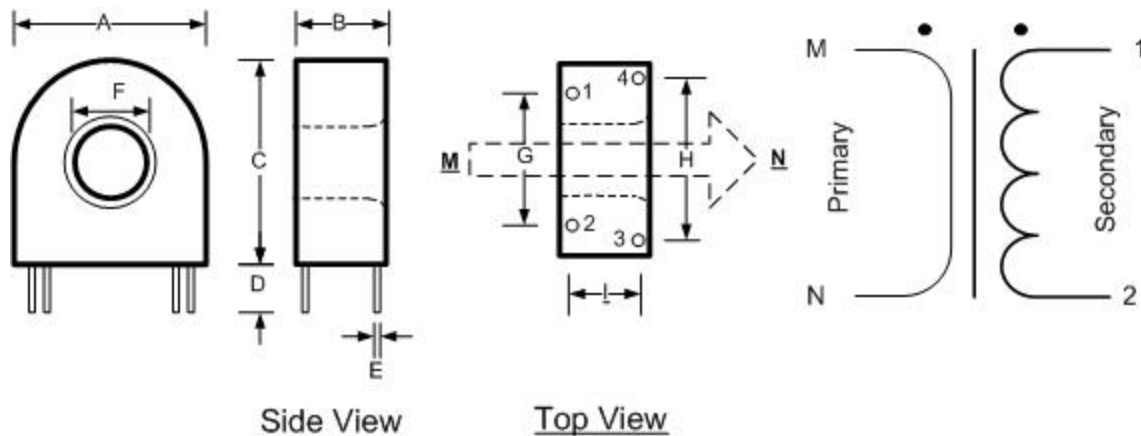
TA21B11-5(20)A/2.5mA Nanocrystalline core (test temperature 25° C)



TA21B11-5(20)A/2.5mA Nickel alloy core (test temperature 25° C)



Outline Drawing:



	A	B	C	D	E	F	G	H	I
TA21B11	23.5m m (0.93")	11.5m m (0.45")	25.0m m (0.98")	3.5mm (0.14")	1.0mm (0.04")	6.7mm (0.26")	15.24mm (0.60")	19.05mm (0.75")	10.16mm (0.40")

NOTE:

- Core material designation:
 - TA21B11B – Nanocrystalline
 - TA21B11G - Nickel Alloy
- The current transformers are bulked packed. Purchase order quantities should be in increments of the bulk pack quantity.

Bulk pack quantity in increments of **133pcs**, **798pcs** per bulk pack box.

Bulk pack box = 13.6kg/ 29.9lbs, 0.018 CBM (37cm/14.6" x 26cm/ 10.2" x 19cm/ 7.5")

Custom PCB mounted 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 or the address below.