

Zero-Flux Transformers

Zero-Flux Miniature Current Transformers

The YUANXING series Mini current transformers are designed for applications where AC current signals must be transformed accurately into a lower AC current or voltage signal appropriate for micro-processor based circuits.

The TAXX7X series of Zero-flux miniature current transformers are sampling transformers designed specifically for high quality measuring instrument, It doesn't need any compensating measure, Which require exceptionally accurate primary signal transformation and insulation.

YUANXING can design and manufacture to meet the specific design challenges of the client's specific application. The following models are only a small sampling of the many different products which have been and are currently being manufactured.



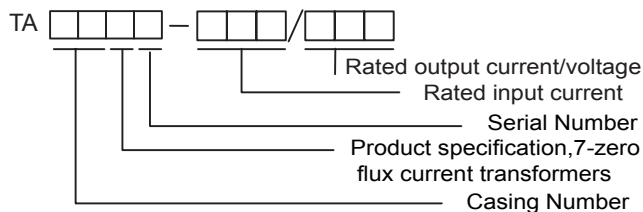
FEATURES

- Low cost • Multiple standard sizes
- Single turn primary winding
- Non-symmetrical mounting pattern

APPLICATIONS

- For applications that require exceptional accuracy with minimal phase angle error
- Applications would include Current, Power and Energy monitoring devices.

PART NUMBER



PERFORMANCES



SPECIFICATIONS

- Rated primary current: 1A, 2A, 5A, 10A, 20A, 50A, 100A
- Rated Secondary current: 1mA, 2mA, 2.5mA, 5mA, 10mA, 20mA, 50mA
- Rated Load Resistance: 10, 20, 50 Ohms
- Frequency: 50 to 5KHz • Surge Withstand: 5000V
- Accuracy Class: as defined in IEC 60044-1 Part 1 Current Transformers Class 0.02, 0.05
- Operating Temperature: -40 to +85° C • RoHS Compliant
- Isolation Current: 2500 Vrms for 1 minute
- Dielectric Resistance: 1000 M Ohms @ 500Vdc
- Exterior Material: ABS or PBT Resin UL flame retardant rating 94-V0
- Interior Insulation: Epoxy Encapsulated

Wound Primary Zero-Flux Current Transformers						
Number	Rated Input current(A)	Ratio	Load (Ω)	Accuracy class	Outline dimension (mm)	Mounting means
TA23B71	1.5, 5, 6	1000:1 2000:1	≤50	0.02 0.05	L-W-H 25.0-21.5-26	PCB
TA5671	1, 2, 5, 10	1000:1 2000:1	≤100	0.02 0.05	OD-H 45-35	PCB
TA54A71	1, 2, 5, 10	1000:1 2000:1	≤100	0.02 0.05	OD-H 40-31	PCB
TA63E71	1, 2, 5, 10, 20	1000:1, 2000:1 3000:1	≤100	0.02 0.05	OD-H 40-33.5	M3 bolting
TA5571	1, 2, 5, 10, 20	1000:1, 2000:1 3000:1, 4000:1	≤100	0.02 0.05	ID-OD-H 12.7-65-35	--
TA25E71	1, 2, 5, 10, 20	1000:1, 2000:1 3000:1, 4000:1	≤100	0.02 0.05	L-W-H 50.0-38.0-55	M4 bolting
Single Turn Primary Zero-Flux Current Transformers						
Number	Rated Input current(A)	Ratio	Load (Ω)	Accuracy class	Outline dimension (mm)	Mounting means
TA23B71	5, 10, 20	1000:1 2000:1	≤50	0.02 0.05	ID-L-W-H 6-25-21.5-26	PCB
TA3371	5, 10, 20	1000:1 2000:1	≤50	0.02 0.05	ID-L-W-H 7.0-28-28-20	PCB
TA23A71	5, 10, 20	1000:1 2000:1	≤50	0.02 0.05	ID-L-W-H 6.0-34-22-36	PCB

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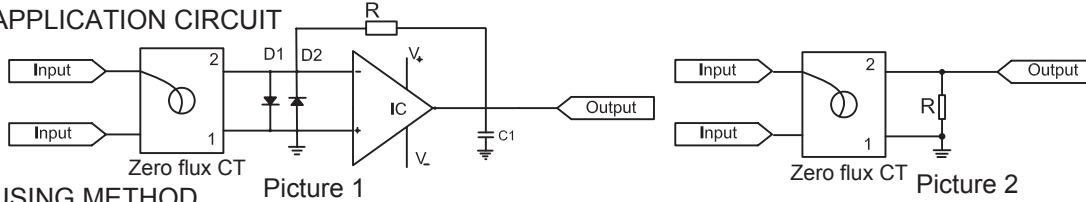
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Number	Rated Input current(A)	Ratio	Load Ω	Accuracy class	Outline dimension (mm)	Mounting means
TA25F71	5,10,20,40,60	1000:1 2000:1	≤ 50	0.02 0.05	ID-L-W-H 15.0-58-23-45	bolting
TA25B71	5,10,20,40,80	1000:1,2000:1 3000:1	≤ 100	0.02 0.05	ID-L-W-H 11.5-53-27-46	M3 bolting
TA5571	5,10,20,40,80	1000:1,2000:1 3000:1,4000:1	≤ 100	0.02 0.05	ID-OD-H 12.7-65-35	--
TA25E71	5,10,20,40,80	1000:1,2000:1 3000:1,4000:1	≤ 100	0.02 0.05	ID-L-W-H 12.7-50-38-55	M4 bolting

APPLICATION CIRCUIT

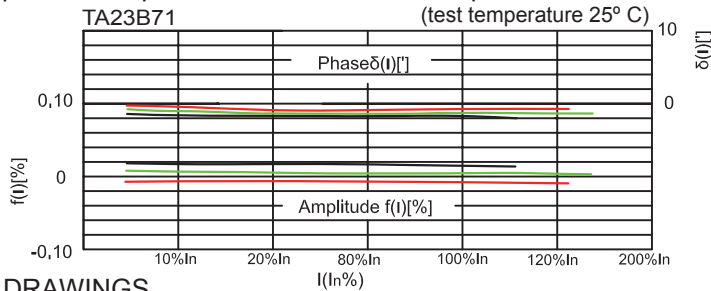


USING METHOD

In order to raise the load capacity of Zero-flux current transformers, Secondary connect the I/V typical application circuit (picture 1). The secondary of transformers worked in the zero load condition. Through adjust the R value of the feedback resistance, to obtain the output voltage, $R=U_2/I_2$. IC can use OP07, D1、D2 diode can select and put to use 1N4148.

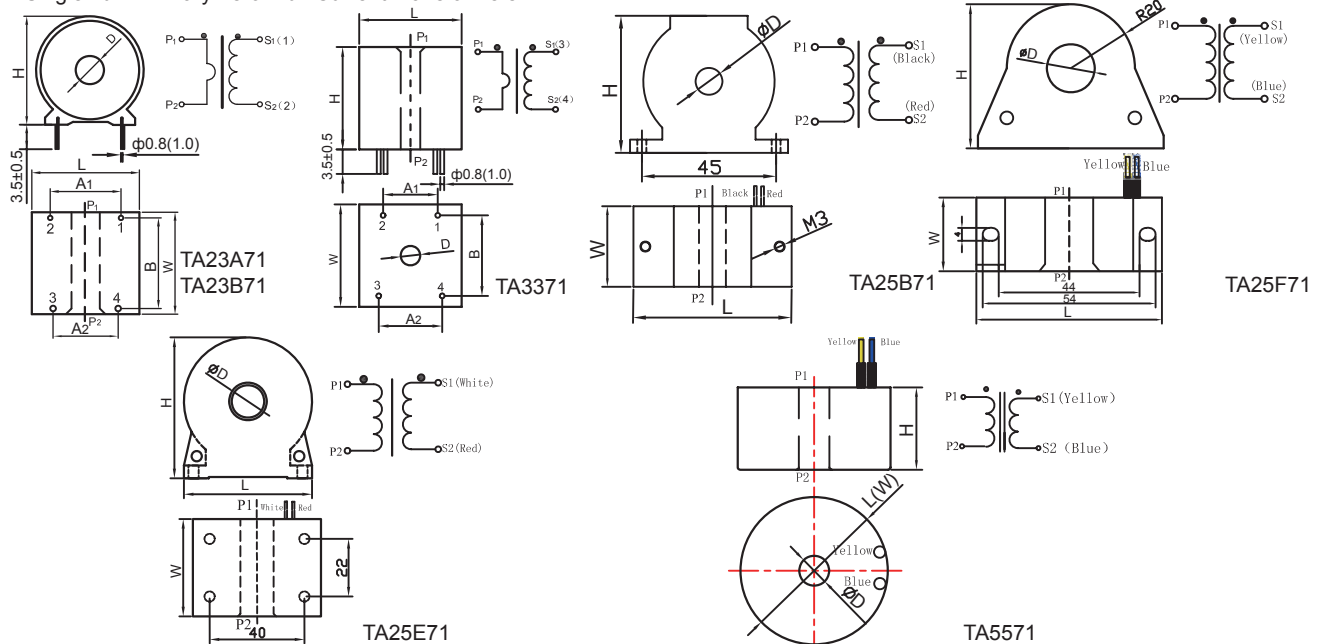
Don't recommend the method as picture 2 the secondary of transformers parallel connection the sampling resistance R. Though this circuit is easy, but the range of dynamic become less, and precision was comparatively large acted upon by temperature changes. If use this method, the output voltage should not beyond 1V, the resistance R should use low temperature drift 20PPm, and R value was fixed when customer place order for goods

Typical Impedance dependence of Phase and Amplitude Errors



OUTLINE DRAWINGS

Single Turn Primary Zero-Flux Current Transformers



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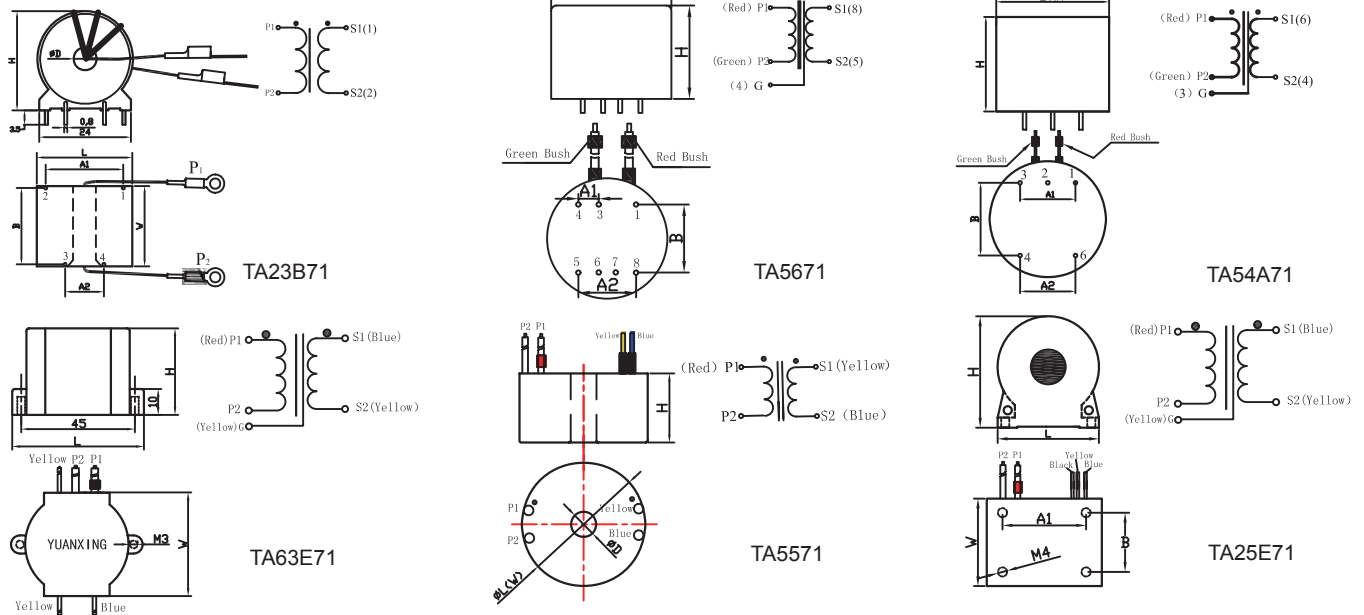
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OUTLINE DRAWINGS

Wound Primary Zero-Flux Current Transformers



OUTLINE DIMENSIONS

Unit: mm (inch)

Single Turn Primary Zero-Flux Current Transformers							
Model	L	W	H	A1	A2	B	D
TA23B71	25.0(0.984)	21.5(0.846)	26.0(1.024)	20.32(0.800)	10.16(0.400)	20.0(0.787)	6.0 (0.236)
TA3371	28.0(1.102)	28.0(1.102)	22.0(0.866)	10.16(0.400)	20.32(0.800)	20.0(0.787)	7.0(0.276)
TA23A71	34.0(1.339)	22.0(0.866)	36.0(1.417)	20.32(0.800)	10.16(0.400)	20.0(0.787)	6.0(0.236)
TA25F71	58.0(2.283)	23.0(0.906)	45.0(1.772)	--	--	--	15.0(0.591)
TA25B71	53.0(2.087)	27.0(1.063)	46.0(1.811)	--	--	--	11.5(0.453)
TA5571	65.0(2.559)	65.0(2.559)	35.0(1.378)	--	--	--	12.7(0.500)
TA25E71	50.0(1.969)	38.0(1.496)	55.0(2.165)	--	--	--	12.7(0.500)

Wound Primary Zero-Flux Current Transformers							
Model	L	W	H	A1	A2	B	D
TA23B71	25.0(0.984)	21.5(0.846)	26.0(1.024)	20.32(0.800)	10.16(0.400)	20.0(0.787)	6.0 (0.236)
TA5671	45.0(1.772)	45.0(1.772)	35.0(1.378)	7.62(0.300)	7.62*3(0.300*3)	25.4(1.000)	--
TA54A71	40.0(1.575)	40.0(1.575)	31.0(1.220)	10.0*2(0.394)	20.0(0.787)	25.0(0.984)	--
TA63E71	51.0(2.008)	41.0(1.614)	33.5(1.319)	--	--	--	--
TA5571	65.0(2.559)	65.0(2.559)	35.0(1.378)	--	--	--	12.7(0.500)
TA25E71	50.0(1.969)	38.0(1.496)	55.0(2.165)	--	--	--	--