

Specification

Product name: High precision Current transformer

Product mode: EHC-CTS018 1.5(6)A/5mA 0.01 10Ω

See the following list for other specifications

Product code: 1230122

Released version: V0

Editor	Check	Approval
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Customer confirm:

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✱ Please confirm whether the sample meets the requirement, the customer approval, please sign in the space and admitted to chop;

Change history

Version	Change content	Reasons for change	Change time and date	Editor
V0	First issue	----	20191121	Yunjie Shen

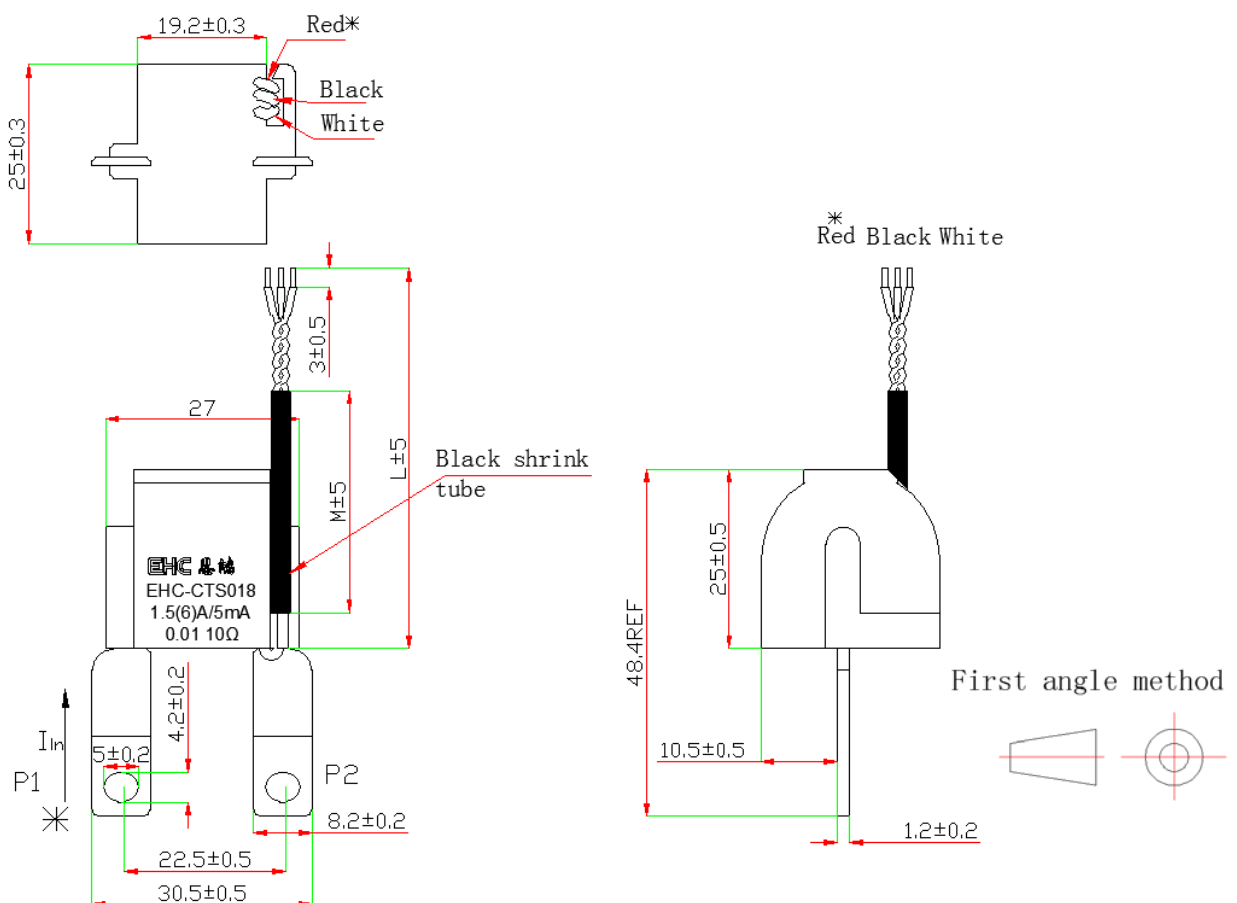
1. Product introduction

CTS series is a high stability precision current transformer, its measurement accuracy is 0.01, 0.005, 0.002, high stability, zero temperature drift, mainly used for the AC current measurement of instruments and meters.

Compared with conventional current transformers, CTS series current transformers have the following advantages:

- A. high precision: 0.01, 0.005, 0.002, or higher.
- B. zero temperature drift: under normal temperature, high temperature (+ 85 °C), and low temperature (- 40 °C), the basic measurement error is unchanged.
- C. the self heating influence quantity is zero: the measurement error change quantity of current transformer caused by the self heating influence quantity is zero.

2. Mechanical outline (mm):



Black
White

White

*
Red Black White

Black shrink
tube

EHC 悬端
EHC-CTS018
1.5(6)A/5mA
0.01 10Ω

EHC-CTS018

1.5(6)A/5mA

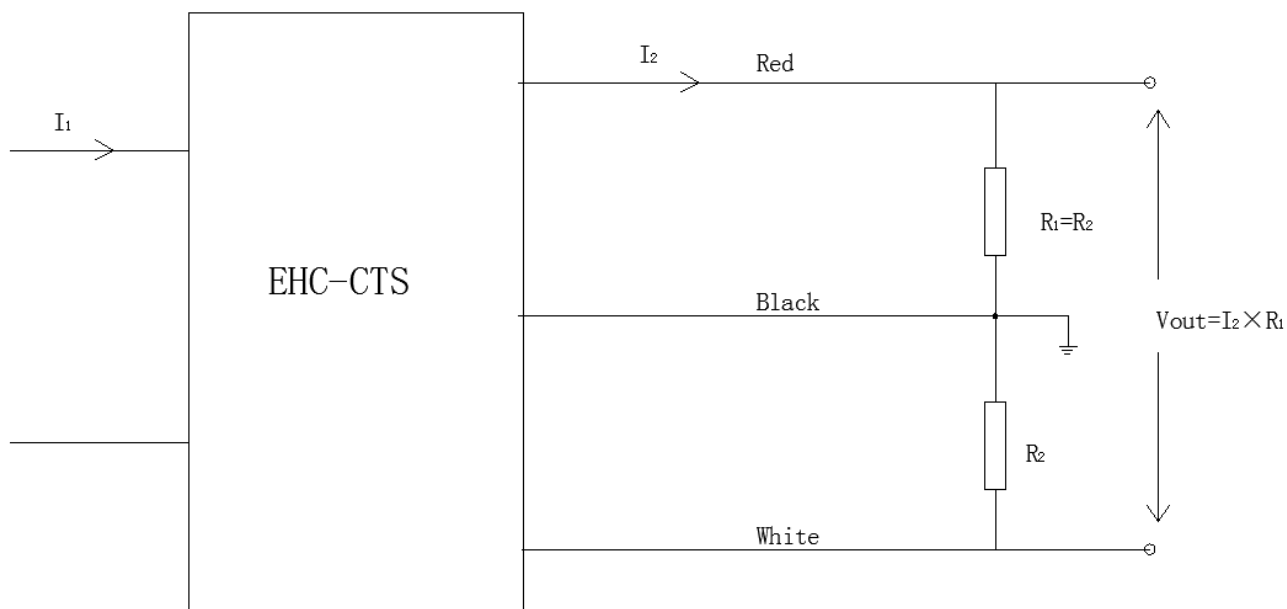
0.01 100

First angle method

Mark * is Dotted terminal, Mark "REF" as reference dimension

Wire length “L\M” according to customer requirements

3. Schematic diagram



Instructions:

CTS series current transformer is a three terminal output current transformer, in which the red line is the positive pole of current output, the black line is the ground wire, and the white line is the negative pole of current output. When using, the current sampling resistance R_1 shall be connected between the red line [positive pole of current output] and the black line [ground wire], the current sampling resistance R_2 and the current sampling resistance R_1 shall be connected between the white line [negative pole of current output] and the black line [ground wire] The equivalent resistance is the current sampling resistance R_2 , and the precision level of the resistance is 0.1% or higher. It is recommended to adopt high-precision low-temperature drift resistance such as 25ppm / °C, 15ppm / °C, 10ppm / °C, 5ppm / °C.

Model	Rated Primary current In (A)	Maximum current Imax (A)	Rated secondary current (mA)	Accuracy class	Load Resistance (Ω)
CTS1.5(6)A/5mA 0.01 10Ω	1.5	6	5	0.01	10
CTS1.5(6)A/5mA 0.005 10Ω	1.5	6	5	0.005	10
CTS1.5(6)A/5mA 0.002 10Ω	1.5	6	5	0.002	10
CTS1.5(10)A/5mA 0.01 10Ω	1.5	10	5	0.01	10
CTS1.5(10)A/5mA 0.005 10Ω	1.5	10	5	0.005	10
CTS1.5(10)A/5mA 0.002 10Ω	1.5	10	5	0.002	10
CTS0.3(1.2)A/1mA 0.01 10Ω	0.3	1.2	1	0.01	10
CTS0.3(1.2)A/1mA 0.005 10Ω	0.3	1.2	1	0.005	10
CTS0.3(1.2)A/1mA 0.002 10Ω	0.3	1.2	1	0.002	10
CTS0.3(10)A/1mA 0.01 10Ω	0.3	10	1	0.01	10
CTS0.3(10)A/1mA 0.005 10Ω	0.3	10	1	0.005	10
CTS0.3(10)A/1mA 0.002 10Ω	0.3	10	1	0.002	10

[illegible][illegible]



7. Customer use cases (e.g. 1.5(6)A/5mA)

Measurement error accuracy test:

Active measurement error test data: $I_n = 1.5A$, $I_{max}=6A$

Accuracy class of measuring and calibration platform is 0.03%

Three Phase Four Wire System		Active error%		
Metering chip: ATT7022EU		23℃	70℃	-40℃
cosΦ=1.0	4lb	0.0066	-0.0177	-0.0177
	2lb	-0.0055	0.0177	-0.0088
	1lb	-0.0133	0.0177	-0.0088
	0.5lb	-0.0035	-0.0142	-0.0213
	0.2lb	-0.0026	0.0071	-0.0177
	0.1lb	-0.0071	0.0142	-0.0177
	0.05lb	-0.0099	0.0149	-0.0149
	0.01lb	-0.0213	0.0071	-0.0135
cosΦ=0.5L	4lb	0.0066	-0.0088	-0.0504
	2lb	0.0088	0.0222	-0.0266
	1lb	0.0022	0.0355	0.0133
	0.5lb	0.0106	0.0071	0.0177
	0.2lb	0.0124	0.0213	-0.0142
	0.1lb	0.0046	0.032	0.0213
	0.05lb	0.0042	-0.0028	0.0177
	0.01lb	0.0257	0.0174	0.0092

8. Operating environment:

(1) Temperature: -40℃~85℃;

Relative humidity≤95%;

(2) The altitude: No more than 4000m.

9. Hi-Pot:

The power-frequency withstand voltage between primary winding to secondary winding and to the ground shall be 4KV, no breakdown, flashover phenomenon, leakage current<1mA;

10. Insulation resistance:

The insulation resistance of the primary winding to the secondary winding and to the



ground should be larger than 1000M Ω /500Vdc;

11. Packaging, labeling, transportation and storage

11.1 Packaging: Packing has substantial protection to the products, to transport storage products have very good protection;

11.2 Mark: Products labeled as sketch, carton marking: product name, model number, quantity, customer material

11.3 Transport: Logistics, or the delivery

11.4 Storage: Current transformer shall be kept at room temperature, air relative humidity is not more than 90% (25 °C) of the interior, and should not have caused the corrosion of harmful gases in the air and other harmful medium environment.

12. Key materials

Name	Specification
Plastic shell	PBT,Black
Core	Nanocrystalline alloy
Enameled wire	QA-1/155 (2UEW/155)
Secondary wire	UL1569 24AWG