

The 519 series residual current transformer is mainly used in low-voltage distribution cabinets such as 380V and 660V to continuously detect and monitor the residual current at the installation nodes of the corresponding circuit.

The shell of this series of products is made of environmentally friendly flame-retardant ABS engineering plastics and high-magnetic nanocrystalline soft magnetic materials. It has the characteristics of high precision, good balance characteristics, small size, high insulation strength, strong impact resistance, and easy installation. It can work reliably and stably in indoor environments.

The 519 series includes 5 circular window products suitable for cable loops and 7 rectangular window products suitable for copper bus loops, a total of 12 specifications of products, which can basically meet the detection of all residual currents in distribution circuits below 3200A.

The entire series of products can be equipped with a unified housing at the terminal position on the product according to customer needs, and the product can be upgraded to a signal acquisition terminal with signal processing and communication functions.

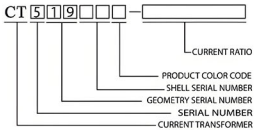
All products are designed with four terminals, and the secondary output of the transformer occupies two terminals. If needed, an experimental winding can be added to simulate leakage by inputting a small current to monitor the working status of the transformer in real time.

For larger products installed on the copper busbar loop, due to their heavy weight, a special mounting bracket is provided to fix the heavier products well in the distribution cabinet. However, the distribution cabinet mounting plate needs to be strong. It is recommended to use a flat mounting bracket to increase the stability of the installation.

FEATURES

- Signal processing units can be added to expand product functions;
- Strong overload capacity, 20 times the rated current can be overloaded for a long time as needed;
- Excellent balance characteristics, small-size products meet the detector alarm threshold 20mA requirements;
- High accuracy: 0.5/1.0/3 levels of accuracy are optional;
- Compact design, small size, beautiful appearance;
- Good consistency and excellent interchangeability;

NAMING



Color code:
0 black 2 red 8 grey 9 white
The shell color specified by the customer is coded and classified according to the main color of the color system;

Normal use and installation conditions

- Installation location: Indoor/outdoor.
- Ambient temperature: -20°C~+50°C.
- Ambient humidity: It is recommended that the relative humidity should not exceed 80%.
- The altitude shall not exceed 3000m.
- Atmospheric conditions: There is no serious pollution, corrosive and explosive media in the atmosphere.
- Environment without significant frequent vibration and shock.
- Storage temperature: -20°C~+75°C.

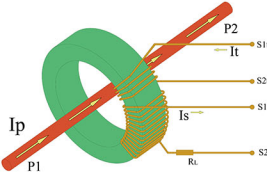
General technical indicators

| Technical indicators | Electrical parameters | | | | |
|-----------------------------------|-----------------------------|-------|-----|-----|------|
| Rated primary current | 1000mA | 5A | 5A | 10A | 10A |
| Rated secondary current | 0.5mA | 2.5mA | 5mA | 5mA | 10mA |
| Rated continuous thermal current | 2000mA | 10A | 10A | 50A | 50A |
| Operating frequency | 50~60Hz | | | | |
| Rated accuracy grade | Equal to or better than 0.5 | | | | |
| Operating voltage | ≤660V | | | | |
| Product flame retardant grade | UL94-V0 | | | | |
| Insulation resistance | ≥1M ohms@500Vdc | | | | |
| Power frequency withstand voltage | 3KV@2mA\1min\50Hz | | | | |
| Insulation heat resistance grade | E-Class | | | | |

Electrical Schematic

The wiring terminals of this series of products are S1, S2, S1t, and S2t, a total of four terminals. Standard products S1 and S2 are the secondary output terminals of the transformer, and S1 and P1 sides have the same name, and S2 and P2 sides have the same name; an experimental winding can be added as needed, and the input end of the experimental winding is S1t, S2t, and S1t and P1 sides have the same name, and S2t and P2 sides have the same name. The number of turns of the test winding generally does not exceed 50 turns, and it can be wound as needed.

The electrical schematic diagram is as follows:



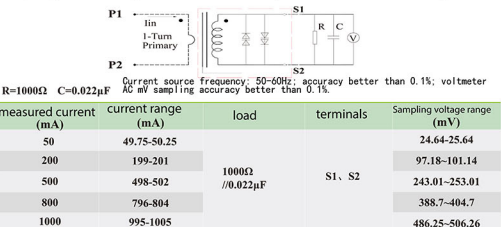
| code | code description |
|---------|--|
| IP | Measured current/input current |
| IS/It | Secondary output current/test input current |
| P1/P2 | Measured current input/output terminal |
| S1/S2 | Secondary current output/input terminal |
| S1t/S2t | Test winding current input/output |
| RL | Secondary internal resistance of transformer |

In actual use, if you need to add a secondary open circuit protection part inside the transformer, you need to explain it specially. The standard product does not contain the secondary open circuit protection part. The open circuit protection can be added with a docking diode or a transient suppression diode.

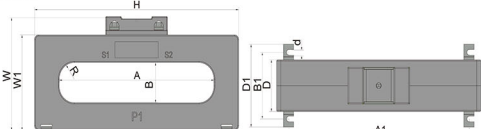
Balance characteristic parameters

| Specifications | Main circuit rated working current | Test current | Conductor diameter | Conductor insulation thickness | Residual current characteristics |
|----------------|------------------------------------|--------------|--------------------|--------------------------------|----------------------------------|
| CT519603 | 0≤In≤160A | 315A | 10mm | 1.5mm | ≤20mA@315A |
| CT519603A | 0≤In≤250A | 315A | 10mm | 1.5mm | ≤20mA@315A |
| CT519603B | 0≤In≤400A | 630A | 14mm | 2.0mm | ≤20mA@630A |
| CT519703 | 0≤In≤630A | 630A | 14mm | 2.0mm | ≤20mA@630A |
| CT519803 | 0≤In≤1000A | 1000A | 20mm | 2.0mm | ≤30mA@1000A |
| CT519903 | 0≤In≤1600A | 2000A | 50mm | 2.0mm | ≤30mA@1000A |
| CT519003 | 0≤In≤2000A | 2000A | 50mm | 2.0mm | ≤50mA@2000A |

When the residual current transformer passes the corresponding sinusoidal AC current, its output sampling value voltage should meet the requirements in the following table.



DIMENSIONS



| MODEL | Main circuit current | Aperture | DIMENSIONS (mm) | | | | | | | MOUNTING (mm) | | | |
|-----------|----------------------|----------|-----------------|----|-----|-------|-----|-----|------|---------------|-----|-----|---|
| | | | H | D | W | W1 | A | B | R | A1 | B1 | D1 | d |
| CT519603 | ≤315A | 122*30 | 170 | 45 | 94 | 78 | 122 | 30 | 12 | | 72 | 58 | 6 |
| CT519603A | ≤315A | 150*35 | 198 | 45 | 99 | 83 | 150 | 35 | 14.5 | 175 | 72 | 58 | 6 |
| CT519603B | ≤630A | 192*40 | 256 | 45 | 120 | 104 | 192 | 40 | 16.5 | | 72 | 58 | 6 |
| CT519703 | ≤630A | 220*50 | 288 | 45 | 128 | 118 | 220 | 50 | 21.5 | 263 | 72 | 58 | 6 |
| CT519803 | ≤1000A | 300*60 | 368 | 45 | 145 | 134.5 | 300 | 60 | 25 | 343 | 125 | 109 | 8 |
| CT519903 | ≤2000A | 400*120 | 504 | 60 | 238 | 227 | 400 | 120 | 50 | 472 | 140 | 124 | 8 |
| CT519003 | ≤2000A | 500*160 | 612 | 60 | 285 | 275 | 500 | 160 | 70 | 580 | 140 | 124 | 8 |