



Smarter Monitoring.
Reliable Power.

DTE2100 Online Monitoring Device for Grounding Current of Transformer Core/Grounding Clamp



Sichuan Yachen Electric Co., Ltd.
Qingdao Britop International Trading Co., Ltd.

DTE2100



Sichuan Yachen Electric Co., Ltd. is a technology-driven manufacturing enterprise headquartered in Mianyang, Sichuan Province—known as China's "City of Science and Technology." Since its establishment in 2004, the company has specialized in the R&D and production of electromagnetic pulse (EMP) protection products, power transmission network monitoring equipment, lightning protection systems, instrumentation, high/low voltage electrical switches, and medical isolated power (IT) systems.

Our solutions are widely deployed across diverse sectors, including construction, electric power, telecommunications, railways, healthcare, and defense. Leveraging a robust R&D team, significant capital investment, and state-of-the-art infrastructure, Yachen Electric maintains long-term strategic partnerships with leading universities and research institutions. This commitment to collaboration ensures continuous technological optimization and innovation. To date, the company holds numerous invention and utility model patents, and all products have been rigorously tested and certified by authoritative Chinese industry bodies.

Our unwavering focus on advanced R&D, stringent quality control, and exceptional product reliability has earned Yachen Electric extensive recognition and acclaim from clients worldwide.

Mission: To enhance global power reliability through cutting-edge intelligent monitoring technology and innovative protection solutions. (使命：通过尖端的智能监测技术和创新的防护方案，提升全球电力的可靠性。)

Core Values:

Precision: In every sensor and every data point. (精准：对待每一个传感器和数据点。)

Integrity: Building trust through reliable infrastructure. (正直：通过可靠的基础设施建立信任。)

Innovation: Solving tomorrow's grid challenges today. (创新：今日即解决明天的电网挑战。)

Corporate Qualifications & Certifications: Yachen Electric is committed to operational excellence and holds several international management certifications, including:

- ▶ **ISO 9001:2015** (Quality Management System)
- ▶ **ISO 45001:2018** (Occupational Health and Safety Management System)
- ▶ **ISO 14001:2015** (Environmental Management System)
- ▶ **AAA-rated Credit Enterprise** (since 2011) and **AAA-rated Quality & Integrity Excellence Unit** (since 2012)

Furthermore, the company serves as the Vice Chairman Unit of the Electromagnetic Pulse and Lightning Protection Technology Professional Committee of the Sichuan Institute of Electronics, and a Director Unit of the Southwest Construction Electrical Information Network. We are also a selected supplier for military-grade products.

To ensure superior customer experience, Yachen Electric maintains a strong presence across major regions in China, providing rapid and high-quality technical support and after-sales service. Our global reach is further extended through an extensive network of authorized distributors.

We sincerely welcome domestic and international partners to explore collaborative opportunities and achieve mutual growth.

国际销售授权书



LETTER OF OFFICIAL INTERNATIONAL SALES AUTHORIZATION

授权方/Authorizer : 四川亚辰电气有限公司/Sichuan Yachen Electric Co., Ltd.
被授权方/Authorized Party : 青岛博越达国际贸易有限公司/Qingdao Britop International Trading Co., Ltd.

授权说明/Authorization Statement :

特此授权青岛博越达国际贸易有限公司开展本公司产品国际销售业务, 本授权真实合法, 有效用于全球商务合作与资质核验。
Sichuan Yachen Electric Co., Ltd. hereby authorizes Qingdao Britop International Trading Co., Ltd. to conduct international sales business of our products. This authorization is legal and valid for global business cooperation and qualification verification.

I. 授权产品/Authorized Products

四川亚辰电气有限公司旗下全系列全部产品 (含现有及授权期内新增、迭代产品), 商标与宣传资料使用许可。
All product series of Sichuan Yachen Electric Co., Ltd.(including existing, newly launched and upgraded products during the valid period), *Permission of Trademark & Marketing Material Usage Right.*

II. 授权区域 Authorized Territory

全球国际市场 (不含中国境内市场)。
Global international markets (excluding domestic China market).

III. 授权类型/Authorization Type

普通国际销售授权, 无二次转授权资格。
General international sales authorization. No sub-authorization is allowed.

IV. 授权期限/Valid Period

2026 年 1 月 1 日至 2028 年 12 月 31 日/Jan 1, 2026 – Dec 31, 2028

V. 品质与供货承诺 /Quality & Supply Commitment

1. 正品保障: 所有授权产品均为原厂正品, 符合国际出口质量标准。
Genuine Product Guarantee: All authorized products are original factory products complying with international export quality standards.
2. 稳定供货: 授权方保障海外订单稳定供货与正常交付。
Stable Supply: The authorizer ensures stable supply and timely delivery for overseas orders.

授权方/Authorizer(盖章/Seal)

Sichuan Yachen Electric Co., Ltd.

签字 Name : 许怀东 Huaidong Xu 许怀东

职务 Title: 总经理 CEO

日期 Date : 2026.7.30

被授权方/Authorized Party(盖章/Seal)

Qingdao Britop International Trading Co., Ltd.

签字 Name : 孟令明 Luming Meng Bright Meng

职务 Title: 总经理 General Manager

日期 Date : 2026.7.30

For and on behalf of
QINGDAO BRITOP INTERNATIONAL TRADING CO., LTD
青岛博越达国际贸易有限公司
Authorized Signature(s)

1 Applications

2 Working principle

3 Features

4 Technical parameters

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7 Operating Conditions

1 Applications

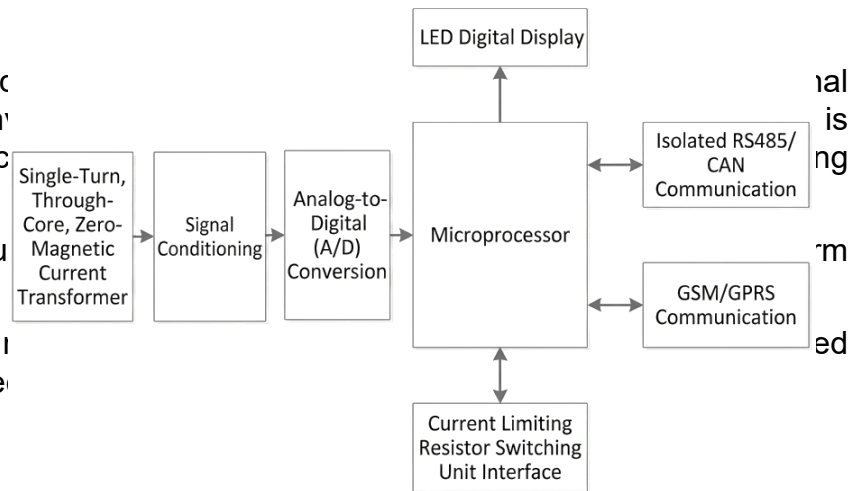
The DTE2100 Online Monitoring Device for Grounding Current of Transformer Core/Grounding Clamp is suitable for online monitoring of the core grounding current and clamping grounding current of transformers with voltage levels of 10kV and above.

The DTE2100 Online Monitoring Device for Grounding Current of Transformer Core/Grounding Clamp can effectively monitor the core grounding current and clamping grounding current in real time. It has the advantages of high accuracy, good stability, and powerful functions. It can be combined with electrical equipment condition assessment systems for condition-based maintenance, evaluation, early warning, and risk analysis, effectively improving the safe operation level of transformers.

2 Working Principle

The online monitoring device for transformer core grounding current/clamping grounding current consists of a through-type current transformer, signal acquisition and processing circuits, communication and display interfaces, etc., as shown in the diagram below:

1. The transformer core grounding current/clamping ground by the through-type current transformer. After signal converted into a digital signal by an analog-to-digital current through digital filtering and calculation.
2. The local display interface can display the real-time ground limit is exceeded.
3. The device can communicate in real-time with a status RS485/CAN/GSM/GPRS communication interfaces (selected).



1) Accurate and Reliable Monitoring Data

The DTE2100 employs a specially designed current transformer, high-precision analog circuitry, and advanced digital signal processing technology. It boasts a wide measurement range (1mA~30A), high accuracy ($\pm 1\%$), and excellent anti-interference performance.

2) Flexible Application Configuration

The DTE2100 features multiple communication interfaces, allowing integration into comprehensive electrical equipment monitoring systems or independent configuration via GSM SMS monitoring.

3) Easy Installation and Maintenance

The DTE2100 main unit and current transformer are independently designed. Dedicated clamps allow for flexible installation of the current transformer onto the core grounding wire, while the DTE2100 main unit can be flexibly installed in various locations depending on site conditions.

The DTE2100 possesses comprehensive self-testing functions, enabling timely status assessment and alarms.

All components, including the sensor (bypass core grounding wire), can be installed and maintained without affecting transformer operation.

4) Safe and Reliable

The through-type current transformer will not damage the grounding wire, nor will it affect the safe operation of the transformer; all components are manufactured according to industry standards and have good resistance to electromagnetic shock and temperature differences; the DTE2100 adopts a fully sealed design and has functions such as corrosion resistance, wind resistance, dust prevention, and electromagnetic interference resistance, and can adapt to harsh outdoor operating environments.

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Technical Parameters 1/2

I. Monitoring Parameters

Detection Parameters	Measurement Range	Accuracy
Core/Clamping Grounding Current	1mA~10A	±1% 或 ±1mA

II. Communication Interface

1) RS485 Communication Interface

Baud Rate: 1200bps~19200bps, default 9600bps;

Isolation Voltage: 2500VRms;

Maximum Bus Nodes: 255;

2) CAN Communication Interface (RS485/CAN, specified when ordering)

Baud Rate: 10kbps~500kbps, default 10kbps;

Isolation Voltage: 2500VRms;

Maximum Bus Nodes: 110;

3) GSM/GPRS Interface (specified when ordering)

Operating Frequency Bands: 4 bands, 850 MHz/900 MHz/1800 MHz/1900 MHz;

GSM SMS (English and Chinese), 10 sender/receiver numbers;

GPRS class 10, maximum downlink speed of 85.6 kbit/s, maximum uplink speed of 42.8 kbit/s, supports TCP/IP, FTP and HTTP protocols.

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Technical Parameters 2/2

III. Display

5-digit digital tube display of current

4-digit LED indicators for power supply, operation, communication, and alarm

IV. Operating Power Supply

Voltage: 85 ~ 264VAC

Frequency: 47 ~ 63Hz

Power: ≤5W

V. Mechanical Characteristics

Device body dimensions: 252mm×164mm×71mm, weight: 1.8kg

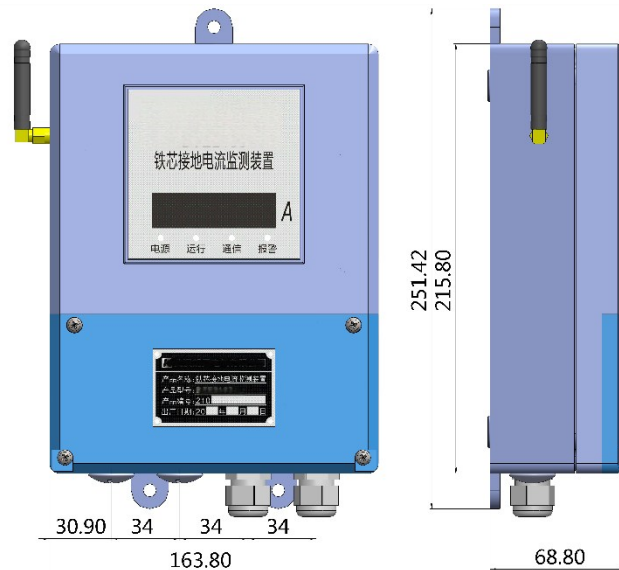
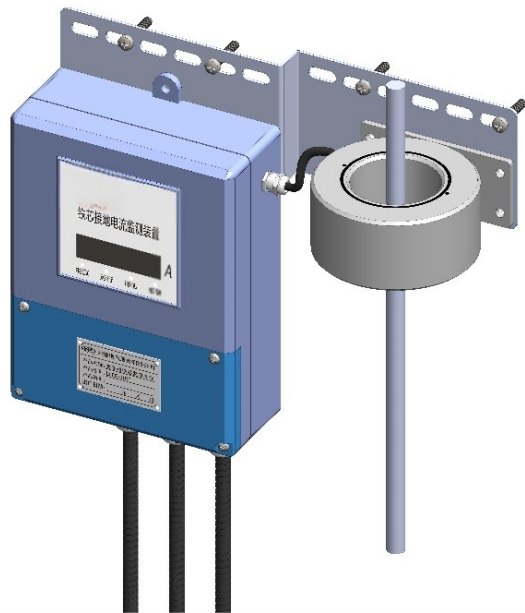
Through-core current transformer:

Without clamp: 114mm×114mm×52mm - aperture ø55mm

With mounting clamp: 140mm×120mm×110mm Weight: 1.6kg

5 Configuration and installation 1/3

Product structure and dimensions

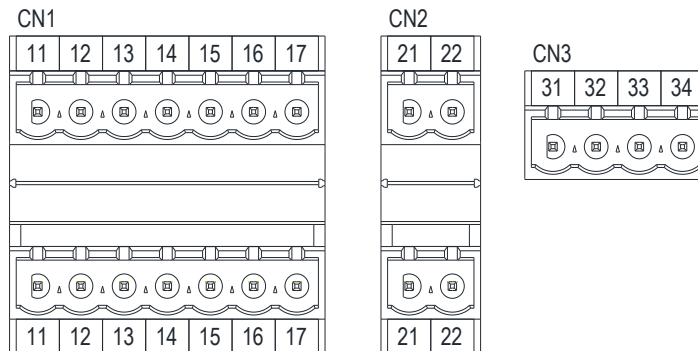
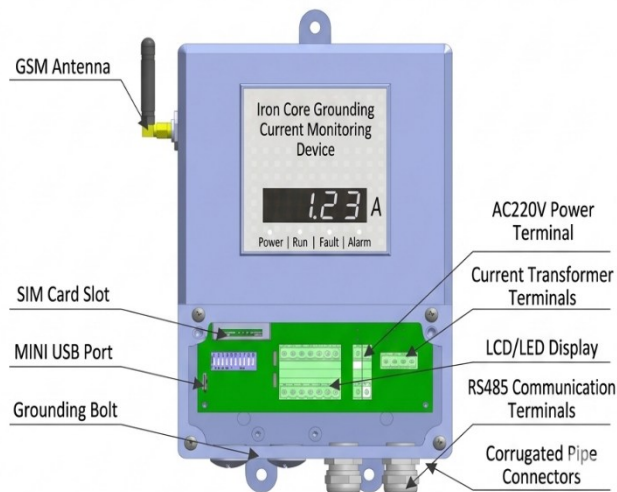


5 Configuration and installation 2/3



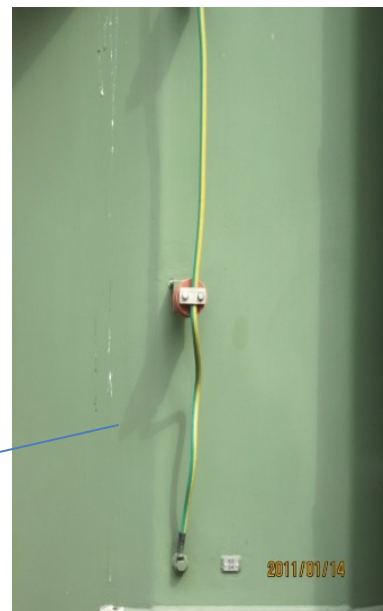
5 Configuration and installation 3/3

II. Interface Description



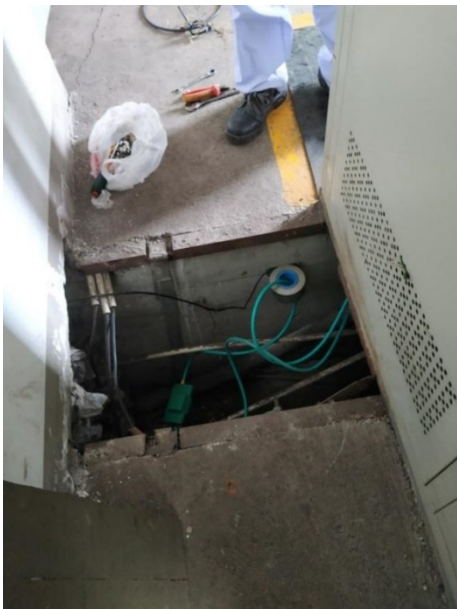
CN1: RS485 interface (Two rows of terminals connected in parallel)		CN2: AC220V power interface (Two rows of terminals connected in parallel)		CN3 : Current Transformer Interface	
11	RS485-A	twenty one	Power supply L	31	I* -Blue
12	RS485- Ground	twenty two	Power supply N	32	I- Gray
13	RS485-B			33	Outer shell - black
14	null			34	Shielding layer
15	null				
16	null				
17	chassis ground				

6 On-site photos 1/6



6 On-site photos 2/6





6 On-site photos 4/6







Currently, the products have been installed in power plants, hydropower stations, power grid company substations, and 10kV transformers in high-voltage rooms of coal mining enterprises, and have been operated well.

More to come

THANK YOU

Smarter Monitoring, Reliable Power.

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