ETCR025KD Split Type DC Leakage Current Sensor

User's Manual

Thanks for your purchase of ETCR025D Split Type DC Leakage current sensor of our company. For better use of the product, please make sure:

---to read this user manual in details.

---to abide by the safety regulations and precautions strictly.

◆Under any circumstance, it shall pay special attention on safety in use of this sensor.
◆Pay attention to words and symbols stick on the panel.
◆Keep the open and close mouth clean, maintenance regularly.
◆High attention to the power input and signal output connections, not reversed.
◆Please don't keep or store the sensor in the spot with high-temperature and moisture, or condensation, and under direct daylight radiation for a long time.
◆This sensor is only to be used, disassembled, and repaired by qualified personnel with authorization.
◆When it may cause hazard by continuous use for the reason of the sensor itself, it shall immediately stop using it and deposit it at once, leaving it for disposal by authorized agency.
◆For risk of danger icon in manual "⚠", users must perform safety operations strictly in compliance with the manual content.

Ⅰ.Introduction

ETCR025KD Split Type DC Leakage Current Sensor is used for measurement of high accuracy DC leakage current, low DC current. Adopt the latest CT technology, double shielding layer and split type design, portable, install on line, no need to disconnect the measured circuits, non-contact, safe and fast. It can be connected with phase detection analyzer, industrial control equipment, data recorder, oscilloscope, harmonic analyzer, electric power quality analyzer, high precision digital multi-meter, etc. Widely applied in electricity, communication, meteorology, railway, oilfield, construction, measurement, scientific and research teaching unit, industrial and mining enterprises.

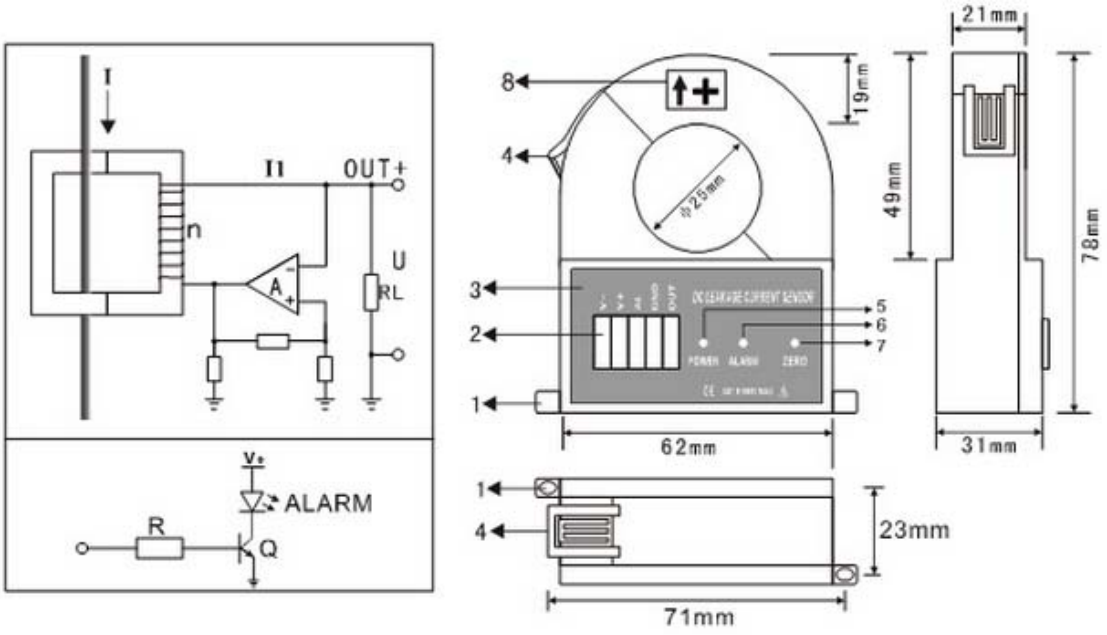
Ⅱ. Technical Specifications

Function	Measurement of DC leakage current, low DC current
Test mode	Split Type CT
CT Size	Φ25mm(available for line $25mm)
Range	0~100mA (DC)
Resolution	0.1mA (DC)
Accuracy	±3.0%FS(23℃±2℃, below 70%RH, keep the wire be in the center of clamp)
Coils Turn	800:1
Power supply	±12VDC±1VDC (or ±5DVC or 9VDC±1VDC)
Power consumption	20mA max
Signal output	50mV/1mA(0~100mA output 0~5V), ±5VCD or 9VDC power supply: 25mV/1mA
Response speed	2 times/sec
Reference Load	RL: 0~600mA≤100ohm; 0-6A≤10ohm; 0-60A≤1ohm;
Output Interface	5P Output Terminals (V- Power negative, V + supply positive, AL warning lamp control terminal, GND power supply and output ground, OUT output)
Output Wire Length	2m(Customize is allowed)
Electric Field Interference	3mA
Measured Wire Position	Approximately in the center of the closed core
Current Frequency	45HZ-60Hz(when measuring big current)
Frequency Feature	10Hz~100kHz
Voltage of circuit	Below DC 600V
Dimension	78mmx71mmx31mm
Weight	About 200g

Working Environment	-10℃ ~ 45℃; below 80%rh
Storage Environment	-10℃ ~60℃; below 70%rh
Insulation Strength	AC 2KV/rms.(between the core and shell)
Safety Rules	IEC1010-1,IEC1010-2-032,Pollution degree:2 CAT Ⅲ(600V)

III. Principle and Structure

The sensor output current I1 base on magnetic balance modulation, the current I1 generate voltage U on the external sampling load resistance RL, so the measured current I can be calculated by measuring U. Output voltage 0~2.5 is proportional to input current 0~100mA.ALARM direction needs external control, external control signal at high potential, light on, control principle refer drawing below.



1. Mounting holes(Φ4mm*6mm)
2. Terminals (V- Power negative, V + supply positive, AL warning lamp control terminal, GND power supply and output ground, OUT output)
3. Panel film
4. Snap-bit
5. POWER lamp
6. Alarm indicator
7. Zore positioner
8. DC current input indicates the positive direction

Note!

(The output terminal according to customer request)

Base mounting dimensions:

⚠	**Clamp live wire or null line separately to measure the DC current of this line. (Note: single wire)**
	Clamp live wire and null line together to measure DC leakage current. (Note: 2 wires)
	Clamp earth wire to measure grounding line leakage current of grounding line. (Note: single wire)

⚠ ***Manufactured by***

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