


# ETCR010KD Split Type High Accuracy DC Leakage Current Sensor

## User's Manual

Thanks for your purchase of ETCR010KD Split Type High Accuracy 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 pliers clean, maintenance regularly.
- ◆ Stop using the sensor when there is a rupture or break.
- ◆ 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

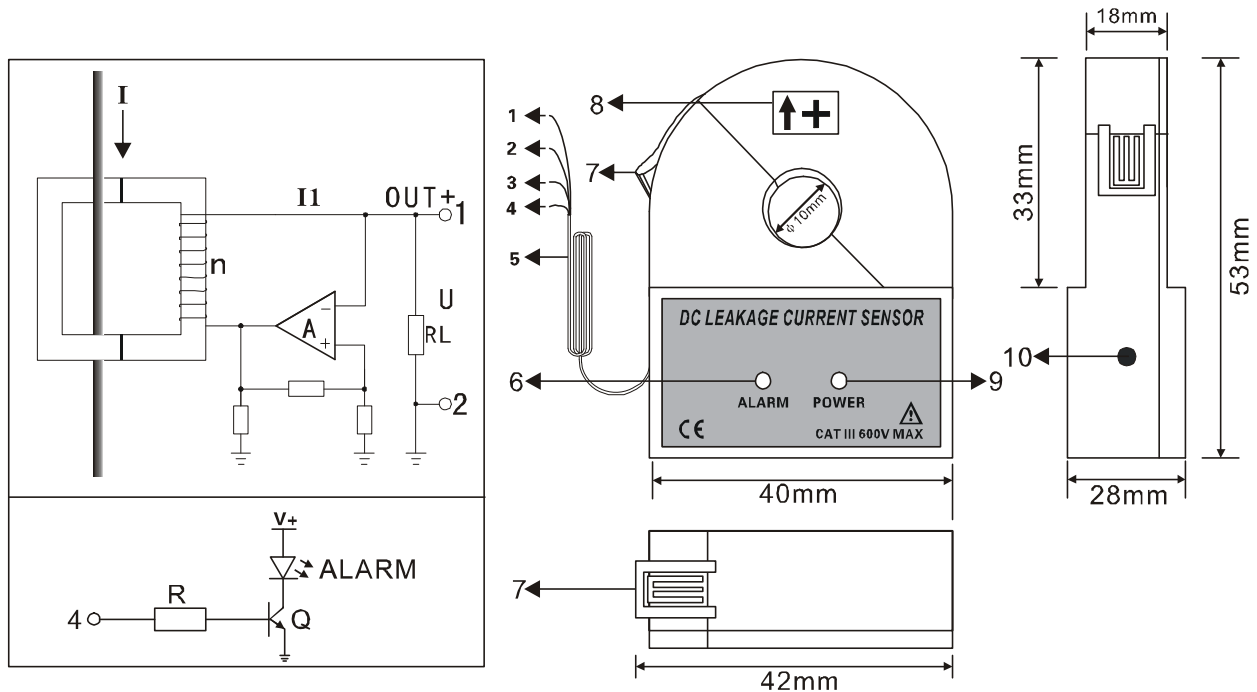
ETCR010KD Split Type High Accuracy Leakage Current Sensor is used for measurement of high accuracy DC leakage current, low DC current. Adopt the latest CT technology, double shielding layer and split type design, portable, install on line, no need to disconnect the measured circuits, non-contact, safe 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

<b>Function</b>	Measurement of DC leakage current, low DC current
<b>Test mode</b>	Split Type CT
<b>Power supply</b>	9V DC±1V DC
<b>Power dissipation</b>	20mA max
<b>Clamp Size</b>	Φ10mm(available for line ≤10mm)
<b>Range</b>	0-100mA DC
<b>Resolution</b>	1mA DC
<b>Accuracy</b>	±3.0%FS(50/60Hz; 23°C±2°C, below 70%RH, keep the wire be in the center of hole)
<b>Coils Turn</b>	800:1(customize is available)
<b>Signal output</b>	25mV/1mA,
<b>Response speed</b>	2 times/sec
<b>Output interface</b>	Brown—positive power input; Yellow—terminal of alert control; Blue—anode signal output; black—GND(cathode power output and cathode signal output, can short circuit with shielding shell )
<b>Output Wire Length</b>	2m
<b>Electric Field Interference</b>	3mA
<b>Measured Wire Position</b>	Approximately in the geometric center of the hole
<b>Voltage of circuit</b>	DC 600V
<b>Dimension</b>	53mm×42mm×28mm
<b>Weight</b>	125g
<b>Working Environment</b>	-20°C-45°C; below 80%rh
<b>Storage Environment</b>	-10°C-60°C; below 70%rh
<b>Insulation Strength</b>	AC 2kV/rms. (between core and shell)
<b>Safety Rules</b>	IEC1010-1, IEC1010-2-032, Pollution degree 2, CAT III(600V)

### III. Principle and Structure

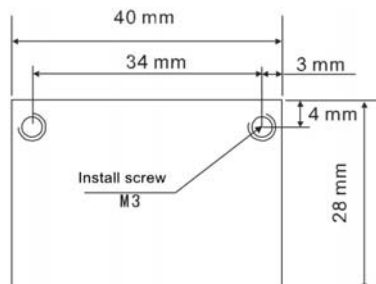
The sensor output current  $I_1$  based on magnetic balance modulation, the current  $I_1$  generates voltage  $U$  on the external sampling load resistance  $R_L$ , so the measured current  $I$  can be calculated by measuring  $U$ . Output voltage 0~2.5 is proportional to input current 0~100mA. ALARM direction needs external control, external control signal at high potential, light on, control principle refer drawing below:



1. Anode signal output (Blue)    2. GND (Black)    3. Anode power supply (Brown)  
 4. The terminal of alert direction control (Yellow)    5. output line (2m)    6. ALARM indicator light  
 7. Lock structure    8. Anode input direction of DC current    9. POWER light    10. Hole of line

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

Base mounting dimensions:



**⚠ Manufactured by**

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